

MIDI Implementation

Model: V71
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Version: 1.12

* In this implementation, the order in which the V71's buttons should be pressed is indicated in the following way. For example, [OTHERS] - [KIT MIDI] means "press the [OTHERS] button, then select [KIT MIDI] with the cursor buttons, and finally press the [ENTER] button."
* For details, refer to the "V71 Reference Manual."

1. Receive Data

■ Channel Voice Messages

* The following Channel Voice Messages can be received by the channel assigned in [OTHERS] - [KIT MIDI] - CHANNEL tab.
* Not received when [SETUP] - [SYSTEM MIDI] - BASIC tab - MIDI Tx/Rx Sw is set to OFF.

● Note On

Status	2nd byte	3rd byte
9nH	kkH	vvH
n = MIDI channel number:		0H - FH (ch. 1 - ch. 16)
kk = note number:		00H - 7FH (0 - 127)
vv = note on velocity:		01H - 7FH (1 - 127)

* Messages are received only on the channel that is assigned to the pad whose note number matches the message.

For details on note numbers, refer to the KIT MIDI page of "V71 Data List" (PDF).

* When the [OTHERS] - [KIT OPTION] - Brush tab - Brush Switch is set to ON, and an instrument compatible with brush performances is selected for the layer A of snare pad head, the note number set by [OTHERS] - [KIT MIDI] - NOTE NO. tab - SNARE BRUSH is received on the channel to which the SNARE HEAD is assigned.

* When an instrument is assigned in the XSTICK - INST screen, the note number set by [OTHERS] - [KIT MIDI] - NOTE NO. tab - SNARE XSTICK is received on the channel to which the SNARE RIM is assigned.

* The note number set by [OTHERS] - [KIT MIDI] - NOTE NO. tab - SNARE THROW ON/OFF is received on the channel to which the SNARE HEAD is assigned.

* When recording, this is recorded in the sequencer data itself.

● Polyphonic Key Pressure

Status	2nd byte	3rd byte
AnH	kkH	vvH
n = MIDI channel number:		0H - FH (ch. 1 - ch. 16)
kk = note number:		00H - 7FH (0 - 127)
vv = value:		00H - 7FH (0 - 127)

* Messages are received only on the channel that is assigned to the pad whose note number matches the message.

For details on note numbers, refer to the PAD MIDI page of "V71 Data List" (PDF).

* If the value is greater than 1, the decay of the note sounded by the received note number will be shortened based on the value (Used in choking).

* When recording, this is recorded in the sequencer data itself.

● Control Change

○ Bank Select (Controller number 0, 32)

Status	2nd byte	3rd byte
BnH	00H	mmH
BnH	20H	11H
n = MIDI channel number:		0H - FH (ch. 1 - ch. 16)
mm = bank number MSB:		processed as 00H
11 = bank number LSB:		00H - 01H

* Bank Select processing will be suspended until a Program Change message is received.

* Not received when [MENU] - [SYSTEM] - [SYSTEM MIDI] - BASIC tab - Program Change Rx is set to OFF.

* The bank number is received only when the channel number is the same as [SETUP] - [SYSTEM MIDI] - BASIC tab - Global MIDI Channel.

* The bank number is received only when the number set in [SETUP] - [SYSTEM MIDI] - PROG CHG tab.

* When recording, this is recorded in the sequencer data itself.

○ Modulation (Controller number 1)

Status	2nd byte	3rd byte
BnH	01H	vvH
n = MIDI channel number:		0H - FH (ch. 1 - ch. 16)
vv = Control value:		00H - 7FH (0 - 127)

Pedal position, head strike position, rim strike position, strainer lever status (*1)

○ Breath Controller (Controller number 2)

Status	2nd byte	3rd byte
BnH	02H	vvH
n = MIDI channel number:		0H - FH (ch. 1 - ch. 16)
vv = Control value:		00H - 7FH (0 - 127)

Pedal position, head strike position, rim strike position, strainer lever status (*1)

○ Foot Controller (Controller number 4)

Status	2nd byte	3rd byte
BnH	04H	vvH
n = MIDI channel number:		0H - FH (ch. 1 - ch. 16)
vv = Control value:		00H - 7FH (0 - 127)

Pedal position, head strike position, rim strike position, strainer lever status (*1)

○ Expression (Controller number 11)

Status	2nd byte	3rd byte
BnH	0BH	vvH
n = MIDI channel number:		0H - FH (ch. 1 - ch. 16)
vv = Control value:		00H - 7FH (0 - 127)

Pedal position, head strike position, rim strike position, strainer lever status (*1)

○ General Purpose Controller 1 (Controller number 16)

Status	2nd byte	3rd byte
BnH	10H	vvH
n = MIDI channel number:		0H - FH (ch. 1 - ch. 16)
vv = Control value:		00H - 7FH (0 - 127)

Pedal position, head strike position, rim strike position, strainer lever status (*1)

○ General Purpose Controller 2 (Controller number 17)

Status	2nd byte	3rd byte
BnH	11H	vvH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
vv = Control value:		00H - 7FH (0 - 127)
		Pedal position, head strike position, rim strike position, strainer lever status (*1)

General Purpose Controller 3 (Controller number 18)

Status	2nd byte	3rd byte
BnH	12H	vvH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
vv = Control value:		00H - 7FH (0 - 127)
		Pedal position, head strike position, rim strike position, strainer lever status (*1)

General Purpose Controller 4 (Controller number 19)

Status	2nd byte	3rd byte
BnH	13H	vvH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
vv = Control value:		00H - 7FH (0 - 127)
		Pedal position, head strike position, rim strike position, strainer lever status (*1)

General Purpose Controller 5 (Controller number 80)

Status	2nd byte	3rd byte
BnH	50H	vvH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
vv = Control value:		00H - 7FH (0 - 127)
		Pedal position, head strike position, rim strike position, strainer lever status (*1)

General Purpose Controller 6 (Controller number 81)

Status	2nd byte	3rd byte
BnH	51H	vvH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
vv = Control value:		00H - 7FH (0 - 127)
		Pedal position, head strike position, rim strike position, strainer lever status (*1)

General Purpose Controller 7 (Controller number 82)

Status	2nd byte	3rd byte
BnH	52H	vvH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
vv = Control value:		00H - 7FH (0 - 127)
		Pedal position, head strike position, rim strike position, strainer lever status (*1)

General Purpose Controller 8 (Controller number 83)

Status	2nd byte	3rd byte
BnH	53H	vvH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
vv = Control value:		00H - 7FH (0 - 127)
		Pedal position, head strike position, rim strike position, strainer lever status (*1)

- (*1)
- On channels to which the HI-HAT BOW is assigned, if the Hi-Hat Pedal CC in [SETUP] - [SYSTEM MIDI] - CONTROL tab is set to the controller number received, the hi-hat control pedal position changes.
 - On channels to which the SNARE HEAD is assigned, if the Snare Strainer CC in [SETUP] - [SYSTEM MIDI] - CONTROL tab is set to the controller number received, the state of the snare strainer lever changes.
 - If either the Snare CC (used for the snare pad head and rim), the Snare Angle CC (used for the snare pad head), the Ride CC (used for the ride pad bow), the Toms/AUXs CC (used for the heads and rims of TOM 1-4 and AUX 1-4), the Hi-Hat CC (used for the hi-hat pad bow) or the Hi-Hat LR CC (used for the hi-hat pad bow and edge) in [SETUP] - [SYSTEM MIDI] - CONTROL tab is set to the controller number received, the strike position of the pad corresponding to the note number received directly afterwards on the same note channel changes.
 - If Snare CC and Toms/AUXs CC has been set, the head strike position changes from the center to the outer edge as the control value increases, and the rim strike position changes from deep to shallow as the control value increases.
 - If Snare Angle CC has been set, the head strike position changes according to the area you strike.
 - If Ride CC and Hi-Hat CC has been set, the head strike position changes from the center to the outer edge as the control value increases.
 - If Ride LR CC and Hi-Hat LR CC has been set, the head and rim strike position changes from left to right as the control value increases.
 - For details on the strike position, refer to the "V71 Reference Manual."
 - When recording, the Hi-Hat Pedal CC, Snare Strainer CC, Snare CC, Snare Angle CC, Ride CC, Ride LR CC, Toms/AUXs CC, Hi-Hat CC and Hi-Hat LR CC are stored in the sequencer data according to the above settings.

High Resolution Velocity Prefix (Controller number 88)

Status	2nd byte	3rd byte
BnH	58H	vvH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
kk = High resolution velocity prefix:		00H - 7FH (0 - 127)

- * If a note-on message with a note-on velocity of 1 - 126 is received immediately thereafter on the same note channel, the note-on velocity and the high resolution velocity prefix give you a finer sense of velocity.
- * On the display, the velocity after the decimal point is shown in the range of .00 to .99.
- * If a note-off is received immediately thereafter on the same note channel, the high resolution velocity prefix is reset.
- * Not Received when [SETUP] - [SYSTEM MIDI] - CONTROL tab - High Resolution Velocity is set to OFF.

Program Change

Status	2nd byte	
CnH	ppH	
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
pp = program number:		00H - 7FH (prog.1 - prog.128)

- * Not Received when [SETUP] - [SYSTEM MIDI] - BASIC tab - Program Change Rx is set to OFF.
- * The sound will change beginning with the next Note-On after the Program Change is received. Voices which were already sounding before the Program Change was received will not be affected.
- * Only the program number set with [SETUP] - [SYSTEM MIDI] - PROG CHG tab is received.
- * Not recorded in the sequencer.

Channel Mode Messages

- * The following Channel Voice Messages can be received by the channel assigned in [OTHERS] - [KIT MIDI] - CHANNEL tab.
- * Not received when [SETUP] - [SYSTEM MIDI] - BASIC tab - MIDI Tx/Rx Sw is set to OFF.

All Sounds Off (Controller number 120)

Status	2nd byte	3rd byte
BnH	78H	00H

n = MIDI channel number: 0H – FH (ch. 1 – ch. 16)

* When this message is received, all currently-sounding notes on the corresponding channel will be silenced. However, the status of channel messages will not change.

●Reset All Controllers (Controller number 121)

Status	2nd byte	3rd byte
BnH	79H	00H
n = MIDI channel number:	0H – FH (ch. 1 – ch. 16)	

* When this message is received, polyphonic key pressure for all pads assigned to the same channel number is reset to 0.

* If the channel number is the same as the channel that is assigned for HI-HAT BOW, the controller that is assigned by [SETUP] – [SYSTEM MIDI] – CONTROL tab – Hi-Hat Pedal CC is reset to 0.

●All Notes Off (Controller number 123)

Status	2nd byte	3rd byte
BnH	7BH	00H
n = MIDI channel number:	0H – FH (ch. 1 – ch. 16)	

* The same processing will be carried out as when All Sounds Off is received.

●OMNI OFF (Controller number 124)

Status	2nd byte	3rd byte
BnH	7CH	00H
n = MIDI channel number:	0H – FH (ch. 1 – ch. 16)	

* The same processing will be carried out as when All Sounds Off is received.

●OMNI ON (Controller number 125)

Status	2nd byte	3rd byte
BnH	7DH	00H
n = MIDI channel number:	0H – FH (ch. 1 – ch. 16)	

* The same processing will be carried out as when All Sounds Off is received.

●MONO (Controller number 126)

Status	2nd byte	3rd byte
BnH	7EH	00H
n = MIDI channel number:	0H – FH (ch. 1 – ch. 16)	
mm = mono number:	00H – 10H (0 – 16)	

* The same processing will be carried out as when All Sounds Off is received.

●POLY (Controller number 127)

Status	2nd byte	3rd byte
BnH	7FH	00H
n = MIDI channel number:	0H – FH (ch. 1 – ch. 16)	

* The same processing will be carried out as when All Sounds Off is received.

■System Realtime Message

* Following System Realtime Messages cannot be recorded in the sequencer.

●Timing Clock

Status
F8H

* Recognized only when the [SETUP] – [SYSTEM MIDI] – SYNC tab – Sync Mode is set at EXTERNAL.

●Start

Status
FAH

* If a START message is received while the song is stopped, the click playback is reset. The song does not play.

* Recognized only when the [SETUP] – [SYSTEM MIDI] – SYNC tab – Sync Mode is set at EXTERNAL.

●Active Sensing

Status
FEH

* When Active Sensing is received, the unit will begin monitoring the intervals of all further messages. While monitoring, if the interval between messages exceeds about 500 ms, the same processing will be carried out as when All Sounds Off, All Notes Off and Reset All Controllers are received, and message interval monitoring will be halted.

■System Exclusive Message

Status	Data byte	Status
FOH	iiH, ddH,, eeH	F7H

FOH: System Exclusive Message status

ii = ID number: An ID number (manufacturer ID) to indicate the manufacturer whose Exclusive message this is. Roland's manufacturer ID is

41H. ID numbers 7EH and 7FH are extensions of the MIDI standard; Universal Non-realtime Messages (7EH) and Universal Realtime

Messages (7FH).

dd, ..., ee = data: 00H-7FH (0-127)

F7H: EOX (End Of Exclusive)

The System Exclusive Messages received by this device are Universal Non-realtime System Exclusive Messages.

This device receives the following system exclusive messages: universal non-realtime system exclusive messages, data request (RQ1), and data set (DT1).

●Universal Non-realtime System Exclusive Messages

○Identity Request Message

Status	Data byte	Status
FOH	7EH, dev, 06H, 01H	F7H

byte	Explanation
FOH	Exclusive status
7EH	ID number (Universal Non-realtime Message)
dev	Device ID(10H – 1FH(17 – 32), 7FH)
	Initial value is 10H(17)
06H	Sub ID#1(General Information)
01H	Sub ID#2(Identity Request)
F7H	EOX(End of Exclusive)

- * When Identity Request is received, Identity Reply message will be transmitted.
- * The [SETUP] – [SYSTEM MIDI] – BASIC tab – Device ID setting is used as the Device ID.

●Data transmission

This instrument can use exclusive messages to exchange many varieties of internal settings with other devices.
The model ID of the exclusive messages used by this instrument is 01H 06H 01H.

○Data Request 1(RQ1)

This message requests the other device to transmit data. The address and size indicate the type and amount of data that is requested. When a Data Request message is received, if the device is in a state in which it is able to transmit data, and if the address and size are appropriate, the requested data is transmitted as a Data Set 1 (DT1) message. If the conditions are not met, nothing is transmitted.

Status	Data byte	Status
FOH	41H, dev, 01H, 06H, 01H, 11H, aaH, bbH, ccH, ddH, ssH, ttH, uuH, vvH, sum	F7H

byte	Explanation
FOH	Exclusive status
41H	ID number (Roland)
dev	Device ID(dev:10H – 1FH, 7FH)
01H	Model ID#1(V71)
06H	Model ID#2(V71)
01H	Model ID#3(V71)
11H	Command ID(RQ1)
aaH	Address MSB
bbH	Address
ccH	Address
ddH	Address LSB
ssH	Size MSB
ttH	Size
uuH	Size
vvH	Size LSB
sum	Checksum
F7H	EOX(End of Exclusive)

- * The size of data that can be transmitted at one time is fixed for each type of data.
And data requests must be made with a fixed starting address and size. Refer to the address and size listed in “3. Parameter Address Map.”
- * For the checksum, refer to “How to calculate the checksum.”

○Data Set 1(DT1)

These messages are used for transmitting the actual data and are used when you want to assign data to the device.

Status	Data byte	Status
FOH	41H, dev, 01H, 06H, 01H, 12H, aaH, bbH, ccH, ddH, eeH, ..., ffH, sum	F7H

byte	Explanation
FOH	Exclusive status
41H	ID number (Roland)
dev	Device ID(dev:10H – 1FH, 7FH)
01H	Model ID#1(V71)
06H	Model ID#2(V71)
01H	Model ID#3(V71)
12H	Command ID(DT1)
aaH	Address MSB
bbH	Address
ccH	Address
ddH	Address LSB
eeH	Data: the actual data to be sent. Multiple bytes of data are transmitted in order starting from the address.
:	:
ffH	Data
sum	Checksum
F7H	EOX (End Of Exclusive)

- * The amount of data that can be transmitted at one time depends on the type of data, and data will be transmitted from the specified starting address and size. Refer to the address and size given in “3. Parameter Address Map.”
- * Data larger than 256 bytes must be divided into packets of 256 bytes or less, and each packet must be sent at an interval of about 20 ms or longer.

2. Transmit Data

- * When [SETUP] – [SYSTEM MIDI] – BASIC tab – Soft Thru MIDI In / Soft Thru USB MIDI In is set to ON, messages received in addition to the following messages are also sent.

■Channel Voice Messages

- * The following channel voice messages are transmitted on the channel specified as [OTHERS] – [KIT MIDI] – CHANNEL tab.
- * Not transmitted when [SETUP] – [SYSTEM MIDI] – BASIC tab – MIDI Tx/Rx Sw is set to OFF.

●Note Off

Status	2nd byte	3rd byte
8nH	kkH	vvH
n = MIDI channel number:		0H – FH (ch.1 – ch.16)
kk = Note number:		00H – 7FH(0 – 127)
vv = Note off velocity:		40H(64) fixed

- * In the channel assigned to the pad, after a pad is struck or the hi-hat control pedal is in the foot closed (splash) position, Note Off is transmitted after the interval set in [OTHERS] – [KIT MIDI] – GATE TIME tab – Gate Time.

●Note On

Status	2nd byte	3rd byte
9nH	kkH	vvH
n = MIDI channel number:		0H - FH(ch.1 - ch.16)
kk = Note number:		00H - 7FH(0 - 127)
vv = Note on velocity:		01H - 7FH(1 - 127)

- * In the channel assigned to the pad, after a pad is struck or the hi-hat control pedal is in the foot closed (splash) position, the note number set for the drum kit is transmitted.
- * For a channel to which SNARE HEAD is assigned, when [OTHERS] - [KIT OPTION] - BRUSH tab - Brush Switch is ON, the note number specified by [OTHERS] - [KIT MIDI] - NOTE NO. tab - SNARE BRUSH is transmitted.
- * For a channel to which SNARE RIM is assigned, when [OTHERS] - [XSTICK] - Analog Xstick Switch is ON or the pad that supports digital connection (PD-14DSX, PD-140DS, etc.) that supports cross-sticking is assigned to a snare, the note number set in the [OTHERS] - [KIT MIDI] - NOTE No. tab - SNARE XSTICK is transmitted then playing cross-sticking on the SNARE pad.
- * For a channel to which SNARE HEAD is assigned, operating the strainer lever on a snare pad for which the strainer lever can be used transmits the note number set in the [OTHERS] - [KIT MIDI] - NOTE NO. tab - SNARE STRAINER ON/OFF.
- * For channels to which SNARE HEAD and RIM are assigned, when [OTHERS] - [STRAINER] - LEVER tab - Strainer Mode is BEHAVIOR and the strainer lever is lowered, or when the Strainer Mode is ALWAYS OFF, the note number set to [OTHERS] - [KIT MIDI] - NOTE NO. tab - STRAINER THROW OFF HEAD/RIM/BRUSH/XSTICK is transmitted.
- * For channels to which HI-HAT BOW is assigned, the note number transmitted when the hi-hat pad is struck (open, closed) switches with the value set with [SETUP] - [SYSTEM MIDI] - CONTROL tab - Hi-Hat Note# Border setting (the Hi-Hat Pedal CC Control value) in accordance with the degree to which the hi-hat pedal is pressed.
- * If the recorded sequencer data itself includes note-on messages, they are transmitted during performance.

●Polyphonic Key Pressure

Status	2nd byte	3rd byte
AnH	kkH	vvH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
kk = Note number:		00H - 7FH(0 - 127)
vv = Value:		00H, 7FH(0, 127)

- * On the channel to which the pad is assigned, 7FH will be transmitted when the rim of the pad is pressed and 00H will be transmitted when the rim is released, for the note number specified for the head and rim. (When using a choking compatible pad and [TRIGGER] - BASIC tab - Trig Type is set to the corresponding pad.)
- * In the case of a digital pad that supports choking technique (such as CY-18DR, VH-14D), a value in the range of 7FH through 00H is transmitted according to the strength of choking.
- * In the case of a digital pad that supports choking technique (such as CY-18DR, VH-14D), polyphonic key pressure is also transmitted when you place your hand on the sensor.
- * If the recorded sequencer data itself includes polyphonic key pressure messages, they are transmitted during performance.

●Control Change

OBank Select (Controller number 0, 32)

Status	2nd byte	3rd byte
BnH	00H	mmH
BnH	20H	lH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
mm = bank number MSB:		00H fixed
lH = bank number LSB:		00H - 01H

- * Not transmitted when [SETUP] - [SYSTEM MIDI] - BASIC tab - Program Change Tx is set to OFF.
- * When a kit is selected, the corresponding bank number specified in the [SETUP] - [SYSTEM MIDI] - PROG CHG tab is transmitted.

OModulation (Controller number 1)

Status	2nd byte	3rd byte
BnH	01H	vvH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
vv = Control value:		00H - 7FH(0 - 127)

Pedal position, head strike position, rim strike position, strainer lever status (*2)

OBreath Controller (Controller number 2)

Status	2nd byte	3rd byte
BnH	02H	vvH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
vv = Control value:		00H - 7FH (0 - 127)

Pedal position, head strike position, rim strike position, strainer lever status (*2)

OFoot Controller (Controller number 4)

Status	2nd byte	3rd byte
BnH	04H	vvH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
vv = Control value:		00H - 7FH (0 - 127)

Pedal position, head strike position, rim strike position, strainer lever status (*2)

OExpression (Controller number 11)

Status	2nd byte	3rd byte
BnH	04H	vvH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
vv = Control value:		00H - 7FH (0 - 127)

Pedal position, head strike position, rim strike position, strainer lever status (*2)

OGeneral Purpose Controller 1(Controller number 16)

Status	2nd byte	3rd byte
BnH	10H	vvH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
vv = Control value:		00H - 7FH (0 - 127)

Pedal position, head strike position, rim strike position, strainer lever status (*2)

OGeneral Purpose Controller 2(Controller number 17)

Status	2nd byte	3rd byte
BnH	11H	vvH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)
vv = Control value:		00H - 7FH (0 - 127)

Pedal position, head strike position, rim strike position, strainer lever status (*2)

OGeneral Purpose Controller 3(Controller number 18)

Status	2nd byte	3rd byte
BnH	12H	vvH
n = MIDI channel number:		0H - FH (ch.1 - ch.16)

vv = Control value: 00H – 7FH (0 – 127)
Pedal position, head strike position, rim strike position, strainer lever status (*2)

General Purpose Controller 4 (Controller number 19)

Status 2nd byte 3rd byte
BnH 13H vvH
n = MIDI channel number: 0H – FH (ch. 1 – ch. 16)
vv = Control value: 00H – 7FH (0 – 127)
Pedal position, head strike position, rim strike position, strainer lever status (*2)

General Purpose Controller 5 (Controller number 80)

Status 2nd byte 3rd byte
BnH 50H vvH
n = MIDI channel number: 0H – FH (ch. 1 – ch. 16)
vv = Control value: 00H – 7FH (0 – 127)
Pedal position, head strike position, rim strike position, strainer lever status (*2)

General Purpose Controller 6 (Controller number 81)

Status 2nd byte 3rd byte
BnH 51H vvH
n = MIDI channel number: 0H – FH (ch. 1 – ch. 16)
vv = Control value: 00H – 7FH (0 – 127)
Pedal position, head strike position, rim strike position, strainer lever status (*2)

General Purpose Controller 7 (Controller number 82)

Status 2nd byte 3rd byte
BnH 52H vvH
n = MIDI channel number: 0H – FH (ch. 1 – ch. 16)
vv = Control value: 00H – 7FH (0 – 127)
Pedal position, head strike position, rim strike position, strainer lever status (*2)

General Purpose Controller 8 (Controller number 83)

Status 2nd byte 3rd byte
BnH 53H vvH
n = MIDI channel number: 0H – FH (ch. 1 – ch. 16)
vv = Control value: 00H – 7FH (0 – 127)
Pedal position, head strike position, rim strike position, strainer lever status (*2)

- (*2)
- On a channel to which the HI-HAT BOW is assigned, if the [SETUP] – [SYSTEM MIDI] – CONTROL tab – Hi-Hat Pedal CC is set to other than OFF, the data is transmitted when operating the hi-hat control pedal. Striking the hi-hat pad causes the data to be transmitted as pedal position data before the note-on message.
 - On a channel to which the SNARE HEAD is assigned, if the Snare Strainer CC in [SETUP] – [SYSTEM MIDI] – CONTROL tab – Snare Strainer CC is set to other than OFF, this is transmitted when you operate the snare strainer lever.
 - When the following three settings are made, the data is sent as strike position data when striking a pad, before the note-on message.
 - Either the Snare CC (used for the snare pad head and rim), the Snare Angle CC (used for the snare head), the Ride CC (used for the ride pad bow), the Ride LR CC (used for the ride pad bow and edge), the Toms/AUXs CC (used for the heads and rims of TOM 1-4 and AUX 1-4), the Hi-Hat CC (used for the hi-hat pad bow) or the Hi-Hat LR CC (used for the hi-hat pad bow and edge) in [SETUP] – [SYSTEM MIDI] – CONTROL tab is set to other than OFF.
 - [TRIGGER] – BASIC tab – Trig Type is set to a type that can detect the strike position, or a digital pad that can detect the strike position is assigned.
 - [TRIGGER] – [ADVANCED] – ADVANCED tab – Position Head/Rim is set to ON.
 - The strike position data transmitted changes as follows.
 - If Snare CC and Toms/AUXs CC has been set, the head strike position changes from the center to the outer edge as the control value increases, and the rim strike position changes from deep to shallow as the control value increases.
 - If Snare Angle CC has been set, the head strike position changes according to the area you strike.
 - If Ride CC and Hi-Hat CC has been set, the head strike position changes from the center to the outer edge as the control value increases.
 - If Ride LR CC and Hi-Hat LR CC has been set, the head and rim strike position changes from left to right as the control value increases.
 - For details on the strike position, refer to the "V71 Reference Manual."
 - If the recorded sequencer data includes Hi-Hat Pedal CC, Snare CC, Snare Angle CC, Snare Strainer CC, Ride CC, Ride LR CC, Toms/AUXs CC, Hi-Hat CC, and Hi-Hat LR CC, the data is transmitted during playing recorded data according to the settings above.

High Resolution Velocity Prefix (Controller number 88)

Status 2nd byte 3rd byte
BnH 58H kkH
n = MIDI channel number: 0H – FH (ch. 1 – ch. 16)
kk = High resolution velocity prefix: 00H – 7FH (0 – 127)

- * Not transmitted when [SETUP] – [SYSTEM MIDI] – CONTROL tab – High Resolution Velocity is set to OFF.
- * When you strike a digital pad, a High Resolution Velocity Prefix is transmitted before note-on according to the velocity.
- * On the display, the velocity after the decimal point is shown in the range of .00 to .99.

Program Change

Status 2nd byte
CnH ppH
n = MIDI channel number: 0H – FH (ch. 1 – ch. 16)
pp = Program number: 00H – 7FH (prog. 1 – prog. 128)

- * Not transmitted when [SETUP] – [SYSTEM MIDI] – BASIC tab – Program Change Tx is set to OFF.
- * When a drum kit is selected, the corresponding program number ([SETUP] – [SYSTEM MIDI] – PROG CHG tab) is transmitted.

System Realtime Messages

Timing Clock

Status
F8H

- * Not transmitted when [SETUP] – [SYSTEM MIDI] – SYNC tab – Sync Out is set to OFF.

Active Sensing

Status
FEH

- * This message is transmitted at intervals of approximately 250 msec.

System Exclusive Message

Identity Reply and Data Set (DT1) are the only System Exclusive messages transmitted by this device.

● Universal Non-realtime System Exclusive Message

○ Identity Reply

Status	Data byte	Status
FOH	7EH, dev, 06H, 02H, 41H, 01H, 06H, 01H, 00H, 00H, 01H, 01H, 02H	F7H
byte	Explanation	
FOH	Exclusive status	
7EH	ID number (Universal Non-realtime Message)	
dev	Device ID (10H - 1FH (17 - 32), 7FH)	
06H	Initial value is 10H (17)	
02H	Sub ID#1 (General Information)	
41H	Sub ID#2 (Identity Reply)	
01H 06H	ID number (Roland)	
01H 00H	Device family code	
00H 01H 01H 02H	Device family number code	
F7H	Software revision level	
	EOX (End of Exclusive)	

* When Identity Request is received, Identity Reply message will be transmitted.

* The [SETUP] - [SYSTEM MIDI] - BASIC tab - Device ID setting is used as the Device ID.

○ Data Set 1 (DT1)

These messages are used for transmitting the actual data and are used when you want to assign data to the device.

Status	Data byte	Status
FOH	41H, dev, 01H, 06H, 01H, 12H, aaH, bbH, ccH, ddH, eeH, ..., ffH, sum	F7H
Byte	Explanation	
FOH	Exclusive status	
41H	ID number (Roland)	
dev	Device ID (dev: 10H-1FH, 7FH)	
01H	Model ID#1 (V71)	
06H	Model ID#2 (V71)	
01H	Model ID#3 (V71)	
12H	Command ID (DT1)	
aaH	Address MSB	
bbH	Address	
ccH	Address	
ddH	Address LSB	
eeH	Data: the actual data to be sent. Multiple bytes of data are transmitted in order starting from the address.	
:	:	
ffH	Data	
sum	Checksum	
F7H	EOX (End Of Exclusive)	

* The amount of data that can be transmitted at one time depends on the type of data, and data will be transmitted from the specified starting address and size. Refer to the address and size given in 3. Parameter Address Map.

* Data larger than 256 bytes must be divided into packets of 256 bytes or less, and each packet must be sent at an interval of about 20 ms or longer.

3. Parameter Address Map

* Transmission of # marked address is divided to some packets. For example, ABH in hexadecimal notation will be divided to 0AH and 0BH, and is sent/received in this order.

* Trigger 1 - 16 corresponds to the TRIGGER BANK No.1 - 16 parameters.

Start Address	Description	
00 00 00 00	Current	[Current]
01 00 00 00	Setup	[Setup]
02 00 00 00	Trigger 1	[Trigger]
02 01 00 00	Trigger 2	[Trigger]
:	:	
02 0F 00 00	Trigger 16	[Trigger]
03 00 00 00	SetList 1	[SetListParams]
03 00 10 00	SetList 2	[SetListParams]
:	:	
03 03 70 00	SetList 32	[SetListParams]
04 00 00 00	Kit 1	[Kit]
04 04 00 00	Kit 2	[Kit]
:	:	
0A 1C 00 00	Kit 200	[Kit]

* [Setup]

Offset Address	Description	
00 00 00	Output	[SetupOutput]
00 01 00	Control	[SetupControl]
00 02 00	Click	[Click]
00 03 00	Misc	[SetupMisc]

* [Trigger]

[TrigAnalog]

The assignments to each trigger within the [TrigAnalog] are as follows.

```

KICK      1
SNARE     2
TOM1      3
TOM2      4
TOM3      5
TOM4      6
HI-HAT    7
CRASH1    8
CRASH2    9
RIDE     10
AUX1     11
AUX2     12
AUX3     13
AUX4     14

```

[TrigDigital]

These are the trigger parameters for a digital pad. The digital pads detected by the V71 are assigned in the order in which they are recognized. Normally you should edit these parameters from within the V71 itself.

Offset Address	Description	
00 00 00	Trigger Misc	[TrigMisc]
00 01 00	Trigger Analog 1	[TrigAnalog]
00 02 00	Trigger Analog 2	[TrigAnalog]
...		
00 0E 00	Trigger Analog 14	[TrigAnalog]
00 0F 00	Trigger Digital 1	[TrigDigital]
00 10 00	Trigger Digital 2	[TrigDigital]
...		
00 1C 00	Trigger Digital 14	[TrigDigital]

* [Kit]

The assignments to each pads within the [Kit] are as follows.

[KitUnitCommon], [KitUnitLayer]

```

KICK      1
SNARE HEAD 2
SNARE RIM  3
TOM1 HEAD  4
TOM1 RIM   5
TOM2 HEAD  6
TOM2 RIM   7
TOM3 HEAD  8
TOM3 RIM   9
TOM4 HEAD 10
TOM4 RIM  11
HI-HAT HEAD 12
HI-HAT RIM 13
CRASH1 HEAD 14
CRASH1 RIM 15
CRASH2 HEAD 16
CRASH2 RIM 17
RIDE HEAD  18
RIDE EDGE  19
RIDE BELL  20
AUX1 HEAD  21
AUX1 RIM   22
AUX2 HEAD  23
AUX2 RIM   24
AUX3 HEAD  25
AUX3 RIM   26
AUX4 HEAD  27
AUX4 RIM   28

```

[KitPad]

```

KICK      1
SNARE     2
TOM1      3
TOM2      4
TOM3      5
TOM4      6
HI-HAT    7
CRASH1    8
CRASH2    9
RIDE     10
AUX1     11
AUX2     12
AUX3     13
AUX4     14

```

The assignments to each BUS FXs within the [Kit] are as follows.

[KitFx]

```

BUS-A FX1  1
BUS-A FX2  2
BUS-B FX1  3
BUS-B FX2  4
BUS-C FX1  5
BUS-C FX2  6
BUS-D FX1  7
BUS-D FX2  8

```

[KitBusSetup]

```

BUS-A  1
BUS-B  2
BUS-C  3
BUS-D  4

```

Offset Address	Description
-------------------	-------------

00 00 00	Kit Common	[KitCommon]
00 02 00	Kit MIDI	[KitMidi]
00 04 00	Kit Master Comp	[KitMasterComp]
00 05 00	Kit Master EQ	[KitMasterEQ]
00 10 00	Kit FX 1	[KitFx]
00 12 00	Kit FX 2	[KitFx]
⋮		
00 1E 00	Kit FX 8	[KitFx]
00 20 00	Kit Unit Common 1	[KitUnitCommon]
00 21 00	Kit Unit Common 2	[KitUnitCommon]
⋮		
00 3B 00	Kit Unit Common 28	[KitUnitCommon]
00 40 00	XStick	[KitUnitLayer]
00 50 00	Kit Unit LayerA 1	[KitUnitLayer]
00 52 00	Kit Unit LayerA 2	[KitUnitLayer]
⋮		
01 06 00	Kit Unit LayerA 28	[KitUnitLayer]
01 10 00	Kit Unit LayerB 1	[KitUnitLayer]
01 12 00	Kit Unit LayerB 2	[KitUnitLayer]
⋮		
01 46 00	Kit Unit LayerB 28	[KitUnitLayer]
01 50 00	Kit Unit LayerC 1	[KitUnitLayer]
01 52 00	Kit Unit LayerC 2	[KitUnitLayer]
⋮		
02 06 00	Kit Unit LayerC 28	[KitUnitLayer]
02 10 00	Kit Pad 1	[KitPad]
02 11 00	Kit Pad 2	[KitPad]
⋮		
02 1D 00	Kit Pad 14	[KitPad]
02 20 00	Kit Bus 1	[KitBusSetup]
02 21 00	Kit Bus 2	[KitBusSetup]
⋮		
02 23 00	Kit Bus 4	[KitBusSetup]
02 30 00	Kit Room	[KitRoom]
02 50 00	Kit Overhead	[KitOverhead]
02 70 00	Kit Reverb	[KitReverb]
03 00 00	Bus Reverb	[KitReverb]
03 10 00	Kit Resonance	[KitResonance]

* [Current]

Offset	Address	Description
#	00 00	0000 aaaa
	00 01	0000 bbbb
	00 02	0000 cccc
	00 03	0000 dddd
		KitNum
		(0 - 199)
		1 - 200
00 00 00 04	Total Size	

* [SetupOutput]

Offset	Address	Description
00 00	0000 000a	Kick Master Assign
		(0 - 1)
		PHONES ONLY,
		PHONES+MASTER (L+R)
00 01	0000 000a	Snare Master Assign
		(0 - 1)
		PHONES ONLY,
		PHONES+MASTER (L+R)
00 02	0000 000a	Tom 1 Master Assign
		(0 - 1)
		PHONES ONLY,
		PHONES+MASTER (L+R)
00 03	0000 000a	Tom 2 Master Assign
		(0 - 1)
		PHONES ONLY,
		PHONES+MASTER (L+R)
00 04	0000 000a	Tom 3 Master Assign
		(0 - 1)
		PHONES ONLY,
		PHONES+MASTER (L+R)
00 05	0000 000a	Tom 4 Master Assign
		(0 - 1)
		PHONES ONLY,
		PHONES+MASTER (L+R)
00 06	0000 000a	Hi-Hat Master Assign
		(0 - 1)
		PHONES ONLY,
		PHONES+MASTER (L+R)
00 07	0000 000a	Crash 1 Master Assign
		(0 - 1)
		PHONES ONLY,
		PHONES+MASTER (L+R)
00 08	0000 000a	Crash 2 Master Assign
		(0 - 1)
		PHONES ONLY,
		PHONES+MASTER (L+R)
00 09	0000 000a	Ride Master Assign
		(0 - 1)
		PHONES ONLY,
		PHONES+MASTER (L+R)
00 0A	0000 000a	Aux 1 Master Assign
		(0 - 1)

00 0B	0000 000a	Aux 2 Master Assign	PHONES ONLY, PHONES+MASTER (L+R) (0 - 1)
00 0C	0000 000a	Aux 3 Master Assign	PHONES ONLY, PHONES+MASTER (L+R) (0 - 1)
00 0D	0000 000a	Aux 4 Master Assign	PHONES ONLY, PHONES+MASTER (L+R) (0 - 1)
00 0E	0000 aaaa	Kick Direct Assign	PHONES ONLY, PHONES+MASTER (L+R) (0 - 15) OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 15)
00 0F	0000 aaaa	Snare Direct Assign	OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 15)
00 10	0000 aaaa	Tom 1 Direct Assign	OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 15)
00 11	0000 aaaa	Tom 2 Direct Assign	OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 15)
00 12	0000 aaaa	Tom 3 Direct Assign	OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 15)
00 13	0000 aaaa	Tom 4 Direct Assign	OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R),

00 1A	0000 aaaa	Aux 3 Direct Assign	MASTER DIRECT L+R (0 - 15) OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R
00 1B	0000 aaaa	Aux 4 Direct Assign	(0 - 15) OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R
00 1C	0000 000a	Bus-A Master Assign	(0 - 1) PHONES ONLY, PHONES+MASTER (L+R)
00 1D	0000 000a	Bus-B Master Assign	(0 - 1) PHONES ONLY, PHONES+MASTER (L+R)
00 1E	0000 000a	Bus-C Master Assign	(0 - 1) PHONES ONLY, PHONES+MASTER (L+R)
00 1F	0000 000a	Bus-D Master Assign	(0 - 1) PHONES ONLY, PHONES+MASTER (L+R)
00 20	0000 000a	Bus Reverb Master Assign	(0 - 1) PHONES ONLY, PHONES+MASTER (L+R)
00 21	0000 000a	Song Master Assign	(0 - 1) PHONES ONLY, PHONES+MASTER (L+R)
00 22	0000 000a	Click Master Assign	(0 - 1) PHONES ONLY, PHONES+MASTER (L+R)
00 23	0000 000a	Mix In Master Assign	(0 - 1) PHONES ONLY, PHONES+MASTER (L+R)
00 24	0000 000a	Bluetooth Master Assign	(0 - 1) PHONES ONLY, PHONES+MASTER (L+R)
00 25	0000 000a	Usb In Main Master Assign	(0 - 1) PHONES ONLY, PHONES+MASTER (L+R)
00 26	0000 000a	Usb In Sub Master Assign	(0 - 1) PHONES ONLY, PHONES+MASTER (L+R)
00 27	0000 aaaa	Bus-A Direct Assign	(0 - 15) OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R
00 28	0000 aaaa	Bus-B Direct Assign	(0 - 15) OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R
00 29	0000 aaaa	Bus-C Direct Assign	(0 - 15) OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R),

			DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 15) OFF,
00 2A	0000 aaaa	Bus-D Direct Assign	DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 15) OFF,
00 2B	0000 aaaa	Bus Reverb Direct Assign	DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 15) OFF,
00 2C	0000 aaaa	Song Direct Assign	DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 15) OFF,
00 2D	0000 aaaa	Click Direct Assign	DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 15) OFF,
00 2E	0000 aaaa	Mix In Direct Assign	DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 15) OFF,
00 2F	0000 aaaa	Bluetooth Direct Assign	DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6,

			DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 15) OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 15) OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 1) MASTER, DIRECT (0 - 1) OFF, ON (0 - 2) -12, -6, 0 (dB) (0 - 10) 20, 25, 31.5, 40, 50, 63, 80, 100, 125, 160, 200 (Hz) (0 - 1) OFF, ON (0 - 1) OFF, ON (0 - 1) OFF, ON (0 - 1) PHONES ONLY, PHONES+MASTER (L+R) (0 - 1) PHONES ONLY, PHONES+MASTER (L+R) (0 - 1) PHONES ONLY, PHONES+MASTER (L+R) (0 - 1) PHONES ONLY, PHONES+MASTER (L+R) (0 - 15) OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 15) OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 15) OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R),
00 30	0000 aaaa	Usb In Main Direct Assign	
00 31	0000 aaaa	Usb In Sub Direct Assign	
00 32	0000 000a	Master Output Mode	
00 33	0000 000a	Faders to Direct	
00 34	0000 00aa	Direct Out Att	
00 35	0000 aaaa	Low Cut Freq	
00 36	0000 000a	Master Low Cut	
00 37	0000 000a	Phones Low Cut	
00 38	0000 000a	Direct Low Cut	
00 39	0000 000a	Overhead Master Assign	
00 3A	0000 000a	Room Master Assign	
00 3B	0000 000a	Reverb Master Assign	
00 3C	0000 000a	Kit Resonance Master Assign	
00 3D	0000 aaaa	Overhead Direct Assign	
00 3E	0000 aaaa	Room Direct Assign	
00 3F	0000 aaaa	Reverb Direct Assign	

			DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 15) OFF, DIRECT 1, DIRECT 2, DIRECT 1+2 (L+R), DIRECT 3, DIRECT 4, DIRECT 3+4 (L+R), DIRECT 5, DIRECT 6, DIRECT 5+6 (L+R), DIRECT 7, DIRECT 8, DIRECT 7+8 (L+R), MASTER DIRECT L, MASTER DIRECT R, MASTER DIRECT L+R (0 - 1) OFF, ON
00 40	0000 aaaa	Kit Resonance Direct Assign	
00 41	0000 000a	Group Faders Sw	
00 00 00 42	Total Size		

* [SetupControl]

Offset Address	Description		
00 00	0000 aaaa	Trig Bank Number	(0 - 15) 1 - 16
00 00 00 01	Total Size		

* [Click]

Offset Address	Description		
00 00	00aa aaaa	Sound	(0 - 14) METRONOME, CLICK, VOICE, BEEP 1, BEEP 2, TEK CLICK, STICKS, CLAVES, WOOD BLOCK, COWBELL, AGOGO, TRIANGLE, TAMBOURINE, MARACAS, CABASA
# 00 01	0000 aaaa	Pan	(-30 - 30) L30 - 1, CENTER, R1 - 30
00 02	0000 bbbb		
# 00 03	0000 aaaa	Level	(-601 - 60) INF, -60.0 - +6.0 [dB]
00 04	0000 bbbb		
00 05	0000 cccc		
00 06	0000 dddd		
00 00 00 07	Total Size		

* [SetupMisc]

Offset Address	Description		
00 00	0000 00aa	Mix In Gain	(0 - 2) 0, +6, +12 (dB)
00 01	0000 00aa	Bluetooth Audio Gain	(0 - 2) 0, +6, +12 (dB)
00 02	0000 00aa	Usb Audio Input MAIN Volume Select	(0 - 2) OFF, SONG, CLICK
00 03	0000 00aa	Usb Audio Input SUB Volume Select	(0 - 2) OFF, SONG, CLICK
# 00 04	0000 aaaa	Usb Audio Input Gain	(-36 - 12) -36 - +12 (dB)
00 05	0000 bbbb		
# 00 06	0000 aaaa	Usb Audio Output Gain	(-24 - 24) -24 - +24 (dB)
00 07	0000 bbbb		
00 08	0000 000a	Global Kit Image	(0 - 1) OFF, ON
00 09	0000 00aa	Global Kit Name Size	(0 - 2) SMALL, MEDIUM, LARGE
00 00 00 0A	Total Size		

* [TrigMisc]

Some characters are not displayed for Trigger Bank Name.

Offset Address	Description		
# 00 00	0000 aaaa	Trigger Bank Name 1	(0 - 127) 0 - 127 [ASCII]
00 01	0000 bbbb		
# 00 02	0000 aaaa	Trigger Bank Name 2	(0 - 127)
00 03	0000 bbbb		

#	00 04	0000 aaaa		0 - 127 [ASCII]
	00 05	0000 bbbb	Trigger Bank Name 3	(0 - 127)
#	00 06	0000 aaaa		0 - 127 [ASCII]
	00 07	0000 bbbb	Trigger Bank Name 4	(0 - 127)
#	00 08	0000 aaaa		0 - 127 [ASCII]
	00 09	0000 bbbb	Trigger Bank Name 5	(0 - 127)
#	00 0A	0000 aaaa		0 - 127 [ASCII]
	00 0B	0000 bbbb	Trigger Bank Name 6	(0 - 127)
#	00 0C	0000 aaaa		0 - 127 [ASCII]
	00 0D	0000 bbbb	Trigger Bank Name 7	(0 - 127)
#	00 0E	0000 aaaa		0 - 127 [ASCII]
	00 0F	0000 bbbb	Trigger Bank Name 8	(0 - 127)
#	00 10	0000 aaaa		0 - 127 [ASCII]
	00 11	0000 bbbb	Trigger Bank Name 9	(0 - 127)
#	00 12	0000 aaaa		0 - 127 [ASCII]
	00 13	0000 bbbb	Trigger Bank Name 10	(0 - 127)
#	00 14	0000 aaaa		0 - 127 [ASCII]
	00 15	0000 bbbb	Trigger Bank Name 11	(0 - 127)
#	00 16	0000 aaaa		0 - 127 [ASCII]
	00 17	0000 bbbb	Trigger Bank Name 12	(0 - 127)
#	00 18	0000 aaaa		0 - 127 [ASCII]
	00 19	0000 bbbb	Trigger Bank Name 13	(0 - 127)
#	00 1A	0000 aaaa		0 - 127 [ASCII]
	00 1B	0000 bbbb	Trigger Bank Name 14	(0 - 127)
#	00 1C	0000 aaaa		0 - 127 [ASCII]
	00 1D	0000 bbbb	Trigger Bank Name 15	(0 - 127)
#	00 1E	0000 aaaa		0 - 127 [ASCII]
	00 1F	0000 bbbb	Trigger Bank Name 16	(0 - 127)
#	00 20	0000 aaaa		0 - 127 [ASCII]
	00 21	0000 bbbb		
	00 22	0000 cccc		
	00 23	0000 dddd	HI-HAT VH-12 Offset	(-100 - 100)
#	00 24	0000 aaaa		-100 - +100
	00 25	0000 bbbb		
	00 26	0000 cccc		
	00 27	0000 dddd	HI-HAT VH-13 Offset	(-100 - 100)
#	00 28	0000 aaaa		-100 - +100
	00 29	0000 bbbb		
	00 2A	0000 cccc		
	00 2B	0000 dddd	HI-HAT VH-14D Offset	(-100 - 100)
#	00 2C	0000 aaaa		-100 - +100
	00 2D	0000 bbbb	HI-HAT VH-12 Foot Splash Sens	(-10 - 10)
#	00 2E	0000 aaaa		-10 - +10
	00 2F	0000 bbbb	HI-HAT VH-13 Foot Splash Sens	(-10 - 10)
#	00 30	0000 aaaa		-10 - +10
	00 31	0000 bbbb	HI-HAT VH-14D Foot Splash Sens	(-10 - 10)
#	00 32	0000 aaaa		-10 - +10
	00 33	0000 bbbb	HI-HAT FD Foot Splash Sens	(-10 - 10)
	00 34	0000 00aa	HI-HAT VH-12 Noise Cancel	(0 - 2)
	00 35	0000 00aa	HI-HAT VH-13 Noise Cancel	1 - 3
	00 36	0000 00aa	HI-HAT VH-14D Noise Cancel	(0 - 2)
	00 37	0000 000a	HI-HAT CC MAX	1 - 3
	00 38	0aaa aaaa	Analog XStick Threshold	(0 - 1)
	00 39	0aaa aaaa	Kick XTalk Cancel	90, 127
00 3A	0aaa aaaa	Snare XTalk Cancel	(0 - 127)	(0 - 80)
00 3B	0aaa aaaa	Tom 1 XTalk Cancel	(0 - 80)	0 - 80
00 3C	0aaa aaaa	Tom 2 XTalk Cancel	(0 - 80)	(0 - 80)
00 3D	0aaa aaaa	Tom 3 XTalk Cancel	(0 - 80)	0 - 80
00 3E	0aaa aaaa	Tom 4 XTalk Cancel	(0 - 80)	(0 - 80)
00 3F	0aaa aaaa	Hi-Hat XTalk Cancel	(0 - 80)	0 - 80
00 40	0aaa aaaa	Crash 1 XTalk Cancel	(0 - 80)	0 - 80
00 41	0aaa aaaa	Crash 2 XTalk Cancel	(0 - 80)	0 - 80
00 42	0aaa aaaa	Ride XTalk Cancel	(0 - 80)	0 - 80
00 43	0aaa aaaa	Aux 1 XTalk Cancel	(0 - 80)	0 - 80
00 44	0aaa aaaa	Aux 2 XTalk Cancel	(0 - 80)	0 - 80
00 45	0aaa aaaa	Aux 3 XTalk Cancel	(0 - 80)	0 - 80
00 46	0aaa aaaa	Aux 4 XTalk Cancel	(0 - 80)	0 - 80

00 47	0000 0aaa	HI-HAT VH-14D Pressure Sens	0 - 80 (0 - 4) 1 - 5 (0 - 2)
00 48	0000 00aa	Global Sens	LOW, NORMAL, HIGH
00 00 00 49	Total Size		

* [TrigAna]log

This area is valid for a pad that is connected to a TRIGGER IN jack.

Offset Address	Description		
00 00	0aaa aaaa	Trig Type	(0 - 68) KD-A22, KD-22, KD-222, KD-220, KD-200, KD-18, KD-180, KD-180L, KD-140, KD-12, KD-120, KD-85, KD-10, KD-9, KD-8, KD-7, KDQ-8, KT-10, KT-9, PDA120, PDA120L, PDA100, PDA100L, PDA140F, PD-12X, PD-128, PD-125X, PD-125, PD-10X, PD-108, PD-105X, PD-105, PD-85, PDX-100, PDX-12, PDX-8, PDX-6, PDQ-8S, PDQ-8, PD-8, VH-13, VH-12, VH-11, VH-10, CY-16R-T, CY-15R, CY-14R-T, CY-14C-T, CY-14C, CY-13R, CY-12R/C, CY-12C-T, CY-12C, CY-8, CY-5, CYQ-12, BT-1, BT-1 SENS, PAD1, PAD2, PAD3, RT-30K, RT-30HR, RT-30H SN, RT-30H TM, RT-10K, RT-10S, RT-10T, OFF
00 01	00aa aaaa	Sensitivity	(0 - 62) 1.0 - 32.0
00 02	00aa aaaa	Rim Gain	(0 - 32) 0 - 3.2
00 03	000a aaaa	Threshold	(0 - 31) 0 - 31
00 04	0000 0aaa	Curve	(0 - 7) LINEAR, EXP1, EXP2, LOG1, LOG2, SPLINE, LOUD1, LOUD2
00 05	0000 0aaa	Ext Noise Cancel	(0 - 5) OFF, 1 - 5
00 06	0aaa aaaa	Head/Rim Adjust	(0 - 80) 0 - 80
00 07	00aa aaaa	Scan Time	(0 - 40) 0 - 4.0(ms)
00 08	0aaa aaaa	Mask Time	(0 - 64) 0 - 64(ms)
00 09	0000 aaaa	Retrigger Cancel	(0 - 15) 1 - 16
00 0A	0000 000a	Position Head	(0 - 1) OFF, ON
00 0B	0000 000a	Position Rim	(0 - 1) OFF, ON
00 00 00 0C	Total Size		

* [TrigDigital]

This area is valid for a digital pad that is connected to a DIGITAL TRIGGER IN jack.
Normally you should edit these parameters from within the V71 itself.

Offset Address	Description		
00 00	00aa aaaa	(reserved)	
00 01	00aa aaaa	Sensitivity	(0 - 62) 1.0 - 32.0
00 02	00aa aaaa	Rim Gain	(0 - 32) 0 - 3.2
00 03	000a aaaa	Threshold	(0 - 31) 0 - 31
00 04	0000 0aaa	Curve	(0 - 7) LINEAR, EXP1, EXP2, LOG1, LOG2, SPLINE, LOUD1, LOUD2
00 05	0000 0aaa	Ext Noise Cancel	(0 - 5) OFF, 1 - 5
00 06	0aaa aaaa	Head/Rim Adjust	(0 - 80) 0 - 80
00 07	00aa aaaa	Scan Time	(0 - 40) 0 - 4.0(ms)
00 08	0aaa aaaa	Mask Time	(0 - 64) 0 - 64(ms)
00 09	0000 aaaa	Retrigger Cancel	(0 - 15) 1 - 16
00 0A	0000 000a	Position Head	(0 - 1) OFF, ON
00 0B	0000 000a	Position Rim	(0 - 1) OFF, ON
# 00 0C	0000 aaaa	Digital Pad Advanced Parameter 1	(*)
# 00 0D	0000 bbbb	Digital Pad Advanced Parameter 2	(*)
# 00 0E	0000 aaaa	Digital Pad Advanced Parameter 3	(*)
# 00 0F	0000 bbbb	Digital Pad Advanced Parameter 4	(*)
# 00 10	0000 aaaa	Digital Pad Advanced Parameter 5	(*)
# 00 11	0000 bbbb	Digital Pad Advanced Parameter 6	(*)
# 00 12	0000 aaaa	Digital Pad Advanced Parameter 7	(*)
# 00 13	0000 bbbb		
# 00 14	0000 aaaa		
# 00 15	0000 bbbb		
# 00 16	0000 aaaa		
# 00 17	0000 bbbb		
# 00 18	0000 aaaa		
# 00 19	0000 bbbb		
# 00 1A	0000 aaaa		

00 1B	0000 bbbb	Digital Pad Advanced Parameter 8	(*1)
00 00 00 1C	Total Size		

(*1) Depending on the pad assignments that are saved within the V71 for digital pads, this area will be as follows. Addresses for which the digital pad has no assignment are ignored.

Normally you should edit these parameters from within the V71 itself.

Digital Pad: PD-14DSX

Offset	Address	Description	
#	00 0C 00 0D	0000 aaaa 0000 bbbb	Position Adjust (0 - 9) 1 - 10
#	00 0E 00 0F	0000 aaaa 0000 bbbb	XStick Detect Sens (0 - 5) OFF, 1 - 5
#	00 10 00 11	0000 aaaa 0000 bbbb	Strainer Lever Sens (0 - 4) 1 - 5
#	00 12 00 13	0000 aaaa 0000 bbbb	LED Brightness (0 - 5) OFF, 1 - 5
#	00 14 00 15	0000 aaaa 0000 bbbb	dummy (ignored)
#	00 16 00 17	0000 aaaa 0000 bbbb	dummy (ignored)
#	00 18 00 19	0000 aaaa 0000 bbbb	dummy (ignored)
#	00 1A 00 1B	0000 aaaa 0000 bbbb	dummy (ignored)

Digital Pad: PD-140DS

Offset	Address	Description	
#	00 0C 00 0D	0000 aaaa 0000 bbbb	Position Adjust (0 - 9) 1 - 10
#	00 0E 00 0F	0000 aaaa 0000 bbbb	XStick Detect Sens (0 - 5) OFF, 1 - 5
#	00 10 00 11	0000 aaaa 0000 bbbb	dummy (ignored)
#	00 12 00 13	0000 aaaa 0000 bbbb	dummy (ignored)
#	00 14 00 15	0000 aaaa 0000 bbbb	dummy (ignored)
#	00 16 00 17	0000 aaaa 0000 bbbb	dummy (ignored)
#	00 18 00 19	0000 aaaa 0000 bbbb	dummy (ignored)
#	00 1A 00 1B	0000 aaaa 0000 bbbb	dummy (ignored)

Digital Pad: CY-18DR

Offset	Address	Description	
#	00 0C 00 0D	0000 aaaa 0000 bbbb	Position Adjust (0 - 9) 1 - 10
#	00 0E 00 0F	0000 aaaa 0000 bbbb	Choke Sens (0 - 5) OFF, 1 - 5
#	00 10 00 11	0000 aaaa 0000 bbbb	Bell Gain (0 - 32) 0 - 3.2
#	00 12 00 13	0000 aaaa 0000 bbbb	Position Adjust LR (0 - 9) 1 - 10
#	00 14 00 15	0000 aaaa 0000 bbbb	dummy (ignored)
#	00 16 00 17	0000 aaaa 0000 bbbb	dummy (ignored)
#	00 18 00 19	0000 aaaa 0000 bbbb	dummy (ignored)
#	00 1A 00 1B	0000 aaaa 0000 bbbb	dummy (ignored)

Digital Pad: VH-14D

Offset	Address	Description	
#	00 0C 00 0D	0000 aaaa 0000 bbbb	Position Adjust (0 - 9) 1 - 10
#	00 0E 00 0F	0000 aaaa 0000 bbbb	Position Adjust LR (0 - 9) 1 - 10
#	00 10 00 11	0000 aaaa 0000 bbbb	Choke Sens (0 - 5) OFF, 1 - 5
#	00 12 00 13	0000 aaaa 0000 bbbb	dummy (ignored)
#	00 14 00 15	0000 aaaa 0000 bbbb	dummy (ignored)
#	00 16 00 17	0000 aaaa 0000 bbbb	dummy (ignored)

#	00 18	0000 aaaa	
	00 19	0000 bbbb	dummy (ignored)
#	00 1A	0000 aaaa	
	00 1B	0000 bbbb	dummy (ignored)

* [SetListParams]

Some characters are not displayed for SetList Name.

Offset Address		Description	
#	00 00	0000 aaaa	
	00 01	0000 bbbb	Set List Bank Name 1 (0 - 127) [ASCII]
#	00 02	0000 aaaa	
	00 03	0000 bbbb	Set List Bank Name 2 (0 - 127) [ASCII]
#	00 04	0000 aaaa	
	00 05	0000 bbbb	Set List Bank Name 3 (0 - 127) [ASCII]
#	00 06	0000 aaaa	
	00 07	0000 bbbb	Set List Bank Name 4 (0 - 127) [ASCII]
#	00 08	0000 aaaa	
	00 09	0000 bbbb	Set List Bank Name 5 (0 - 127) [ASCII]
#	00 0A	0000 aaaa	
	00 0B	0000 bbbb	Set List Bank Name 6 (0 - 127) [ASCII]
#	00 0C	0000 aaaa	
	00 0D	0000 bbbb	Set List Bank Name 7 (0 - 127) [ASCII]
#	00 0E	0000 aaaa	
	00 0F	0000 bbbb	Set List Bank Name 8 (0 - 127) [ASCII]
#	00 10	0000 aaaa	
	00 11	0000 bbbb	Set List Bank Name 9 (0 - 127) [ASCII]
#	00 12	0000 aaaa	
	00 13	0000 bbbb	Set List Bank Name 10 (0 - 127) [ASCII]
#	00 14	0000 aaaa	
	00 15	0000 bbbb	Set List Bank Name 11 (0 - 127) [ASCII]
#	00 16	0000 aaaa	
	00 17	0000 bbbb	Set List Bank Name 12 (0 - 127) [ASCII]
#	00 18	0000 aaaa	
	00 19	0000 bbbb	Set List Bank Name 13 (0 - 127) [ASCII]
#	00 1A	0000 aaaa	
	00 1B	0000 bbbb	Set List Bank Name 14 (0 - 127) [ASCII]
#	00 1C	0000 aaaa	
	00 1D	0000 bbbb	Set List Bank Name 15 (0 - 127) [ASCII]
#	00 1E	0000 aaaa	
	00 1F	0000 bbbb	Set List Bank Name 16 (0 - 127) [ASCII]
#	00 20	0000 aaaa	
	00 21	0000 bbbb	
	00 22	0000 cccc	
	00 23	0000 dddd	Step 1 Kit (-1 - 199) END (*2), 1 - 200
#	00 24	0000 aaaa	
	00 25	0000 bbbb	
	00 26	0000 cccc	
	00 27	0000 dddd	Step 2 Kit (-1 - 199) END (*2), 1 - 200
#	00 28	0000 aaaa	
	00 29	0000 bbbb	
	00 2A	0000 cccc	
	00 2B	0000 dddd	Step 3 Kit (-1 - 199) END (*2), 1 - 200
#	00 2C	0000 aaaa	
	00 2D	0000 bbbb	
	00 2E	0000 cccc	
	00 2F	0000 dddd	Step 4 Kit (-1 - 199) END (*2), 1 - 200
#	00 30	0000 aaaa	
	00 31	0000 bbbb	
	00 32	0000 cccc	
	00 33	0000 dddd	Step 5 Kit (-1 - 199) END (*2), 1 - 200
#	00 34	0000 aaaa	
	00 35	0000 bbbb	
	00 36	0000 cccc	
	00 37	0000 dddd	Step 6 Kit (-1 - 199) END (*2), 1 - 200
#	00 38	0000 aaaa	
	00 39	0000 bbbb	
	00 3A	0000 cccc	
	00 3B	0000 dddd	Step 7 Kit (-1 - 199) END (*2), 1 - 200
#	00 3C	0000 aaaa	
	00 3D	0000 bbbb	
	00 3E	0000 cccc	
	00 3F	0000 dddd	Step 8 Kit (-1 - 199) END (*2), 1 - 200
#	00 40	0000 aaaa	
	00 41	0000 bbbb	
	00 42	0000 cccc	
	00 43	0000 dddd	Step 9 Kit (-1 - 199) END (*2), 1 - 200
#	00 44	0000 aaaa	

#	00 45	0000 bbbb	Step 10 Kit	END (*2), 1 - 200 (-1 - 199)
	00 46	0000 cccc		
	00 47	0000 dddd		
#	00 48	0000 aaaa	Step 11 Kit	END (*2), 1 - 200 (-1 - 199)
	00 49	0000 bbbb		
	00 4A	0000 cccc		
#	00 4B	0000 dddd	Step 12 Kit	END (*2), 1 - 200 (-1 - 199)
	00 4C	0000 aaaa		
	00 4D	0000 bbbb		
#	00 4E	0000 cccc	Step 13 Kit	END (*2), 1 - 200 (-1 - 199)
	00 4F	0000 dddd		
	00 50	0000 aaaa		
#	00 51	0000 bbbb	Step 14 Kit	END (*2), 1 - 200 (-1 - 199)
	00 52	0000 cccc		
	00 53	0000 dddd		
#	00 54	0000 aaaa	Step 15 Kit	END (*2), 1 - 200 (-1 - 199)
	00 55	0000 bbbb		
	00 56	0000 cccc		
#	00 57	0000 dddd	Step 16 Kit	END (*2), 1 - 200 (-1 - 199)
	00 58	0000 aaaa		
	00 59	0000 bbbb		
#	00 5A	0000 cccc	Step 17 Kit	END (*2), 1 - 200 (-1 - 199)
	00 5B	0000 dddd		
	00 5C	0000 aaaa		
#	00 5D	0000 bbbb	Step 18 Kit	END (*2), 1 - 200 (-1 - 199)
	00 5E	0000 cccc		
	00 5F	0000 dddd		
#	00 60	0000 aaaa	Step 19 Kit	END (*2), 1 - 200 (-1 - 199)
	00 61	0000 bbbb		
	00 62	0000 cccc		
#	00 63	0000 dddd	Step 20 Kit	END (*2), 1 - 200 (-1 - 199)
	00 64	0000 aaaa		
	00 65	0000 bbbb		
#	00 66	0000 cccc	Step 21 Kit	END (*2), 1 - 200 (-1 - 199)
	00 67	0000 dddd		
	00 68	0000 aaaa		
#	00 69	0000 bbbb	Step 22 Kit	END (*2), 1 - 200 (-1 - 199)
	00 6A	0000 cccc		
	00 6B	0000 dddd		
#	00 6C	0000 aaaa	Step 23 Kit	END (*2), 1 - 200 (-1 - 199)
	00 6D	0000 bbbb		
	00 6E	0000 cccc		
#	00 6F	0000 dddd	Step 24 Kit	END (*2), 1 - 200 (-1 - 199)
	00 70	0000 aaaa		
	00 71	0000 bbbb		
#	00 72	0000 cccc	Step 25 Kit	END (*2), 1 - 200 (-1 - 199)
	00 73	0000 dddd		
	00 74	0000 aaaa		
#	00 75	0000 bbbb	Step 26 Kit	END (*2), 1 - 200 (-1 - 199)
	00 76	0000 cccc		
	00 77	0000 dddd		
#	00 78	0000 aaaa	Step 27 Kit	END (*2), 1 - 200 (-1 - 199)
	00 79	0000 bbbb		
	00 7A	0000 cccc		
#	00 7B	0000 dddd	Step 28 Kit	END (*2), 1 - 200 (-1 - 199)
	00 7C	0000 aaaa		
	00 7D	0000 bbbb		
#	00 7E	0000 cccc	Step 29 Kit	END (*2), 1 - 200 (-1 - 199)
	00 7F	0000 dddd		
	01 00	0000 aaaa		
#	01 01	0000 bbbb	Step 30 Kit	END (*2), 1 - 200 (-1 - 199)
	01 02	0000 cccc		
	01 03	0000 dddd		
#	01 04	0000 aaaa	Step 31 Kit	END (*2), 1 - 200 (-1 - 199)
	01 05	0000 bbbb		
	01 06	0000 cccc		
#	01 07	0000 dddd	Step 32 Kit	END (*2), 1 - 200 (-1 - 199)
	01 08	0000 aaaa		
	01 09	0000 bbbb		
#	01 0A	0000 cccc	Step 33 Kit	END (*2), 1 - 200 (-1 - 199)
	01 0B	0000 dddd		
	01 0C	0000 aaaa		
#	01 0D	0000 bbbb	Step 34 Kit	END (*2), 1 - 200 (-1 - 199)
	01 0E	0000 cccc		
	01 0F	0000 dddd		
#	01 10	0000 aaaa	Step 35 Kit	END (*2), 1 - 200 (-1 - 199)
	01 11	0000 bbbb		
	01 12	0000 cccc		
#	01 13	0000 dddd	Step 36 Kit	END (*2), 1 - 200 (-1 - 199)
	01 14	0000 aaaa		
	01 15	0000 bbbb		
#	01 16	0000 cccc	Step 37 Kit	END (*2), 1 - 200 (-1 - 199)
	01 17	0000 dddd		
	01 18	0000 aaaa		
#	01 19	0000 bbbb	Step 38 Kit	END (*2), 1 - 200 (-1 - 199)
	01 1A	0000 cccc		
	01 1B	0000 dddd		

#	01 1B	0000 dddd	Step 31 Kit	(-1 - 199) END (*2), 1 - 200
	01 1C	0000 aaaa		
	01 1D	0000 bbbb		
	01 1E	0000 cccc		
	01 1F	0000 dddd	Step 32 Kit	(-1 - 199) END (*2), 1 - 200
00 00 01 20			Total Size	

(*2) The last step of each set list (shown as END on the actual unit) has a value of -1.

* [KitCommon]

Some characters are not displayed for Kit Name and Kit Sub Name.

Offset Address	Description		
00 00	0aaa aaaa	Kit Name 1	(0 - 127) 0 - 127 [ASCII]
00 01	0aaa aaaa	Kit Name 2	(0 - 127) 0 - 127 [ASCII]
00 02	0aaa aaaa	Kit Name 3	(0 - 127) 0 - 127 [ASCII]
00 03	0aaa aaaa	Kit Name 4	(0 - 127) 0 - 127 [ASCII]
00 04	0aaa aaaa	Kit Name 5	(0 - 127) 0 - 127 [ASCII]
00 05	0aaa aaaa	Kit Name 6	(0 - 127) 0 - 127 [ASCII]
00 06	0aaa aaaa	Kit Name 7	(0 - 127) 0 - 127 [ASCII]
00 07	0aaa aaaa	Kit Name 8	(0 - 127) 0 - 127 [ASCII]
00 08	0aaa aaaa	Kit Name 9	(0 - 127) 0 - 127 [ASCII]
00 09	0aaa aaaa	Kit Name 10	(0 - 127) 0 - 127 [ASCII]
00 0A	0aaa aaaa	Kit Name 11	(0 - 127) 0 - 127 [ASCII]
00 0B	0aaa aaaa	Kit Name 12	(0 - 127) 0 - 127 [ASCII]
00 0C	0aaa aaaa	Kit Name 13	(0 - 127) 0 - 127 [ASCII]
00 0D	0aaa aaaa	Kit Name 14	(0 - 127) 0 - 127 [ASCII]
00 0E	0aaa aaaa	Kit Name 15	(0 - 127) 0 - 127 [ASCII]
00 0F	0aaa aaaa	Kit Name 16	(0 - 127) 0 - 127 [ASCII]
00 10	0aaa aaaa	Kit Sub Name 1	(0 - 127) 0 - 127 [ASCII]
00 11	0aaa aaaa	Kit Sub Name 2	(0 - 127) 0 - 127 [ASCII]
00 12	0aaa aaaa	Kit Sub Name 3	(0 - 127) 0 - 127 [ASCII]
00 13	0aaa aaaa	Kit Sub Name 4	(0 - 127) 0 - 127 [ASCII]
00 14	0aaa aaaa	Kit Sub Name 5	(0 - 127) 0 - 127 [ASCII]
00 15	0aaa aaaa	Kit Sub Name 6	(0 - 127) 0 - 127 [ASCII]
00 16	0aaa aaaa	Kit Sub Name 7	(0 - 127) 0 - 127 [ASCII]
00 17	0aaa aaaa	Kit Sub Name 8	(0 - 127) 0 - 127 [ASCII]
00 18	0aaa aaaa	Kit Sub Name 9	(0 - 127) 0 - 127 [ASCII]
00 19	0aaa aaaa	Kit Sub Name 10	(0 - 127) 0 - 127 [ASCII]
00 1A	0aaa aaaa	Kit Sub Name 11	(0 - 127) 0 - 127 [ASCII]
00 1B	0aaa aaaa	Kit Sub Name 12	(0 - 127) 0 - 127 [ASCII]
00 1C	0aaa aaaa	Kit Sub Name 13	(0 - 127) 0 - 127 [ASCII]
00 1D	0aaa aaaa	Kit Sub Name 14	(0 - 127) 0 - 127 [ASCII]
00 1E	0aaa aaaa	Kit Sub Name 15	(0 - 127) 0 - 127 [ASCII]
00 1F	0aaa aaaa	Kit Sub Name 16	(0 - 127) 0 - 127 [ASCII]
00 20	0aaa aaaa	Kit Sub Name 17	(0 - 127) 0 - 127 [ASCII]
00 21	0aaa aaaa	Kit Sub Name 18	(0 - 127) 0 - 127 [ASCII]
00 22	0aaa aaaa	Kit Sub Name 19	(0 - 127) 0 - 127 [ASCII]
00 23	0aaa aaaa	Kit Sub Name 20	(0 - 127) 0 - 127 [ASCII]
00 24	0aaa aaaa	Kit Sub Name 21	(0 - 127) 0 - 127 [ASCII]
00 25	0aaa aaaa	Kit Sub Name 22	(0 - 127) 0 - 127 [ASCII]
00 26	0aaa aaaa	Kit Sub Name 23	(0 - 127) 0 - 127 [ASCII]
00 27	0aaa aaaa	Kit Sub Name 24	(0 - 127) 0 - 127 [ASCII]
00 28	0aaa aaaa	Kit Sub Name 25	(0 - 127) 0 - 127 [ASCII]
00 29	0aaa aaaa	Kit Sub Name 26	(0 - 127) 0 - 127 [ASCII]
00 2A	0aaa aaaa	Kit Sub Name 27	(0 - 127) 0 - 127 [ASCII]
00 2B	0aaa aaaa	Kit Sub Name 28	(0 - 127) 0 - 127 [ASCII]

	00 2C	0aaa aaaa	Kit Sub Name 29	(0 - 127)
	00 2D	0aaa aaaa	Kit Sub Name 30	0 - 127 [ASCII]
	00 2E	0aaa aaaa	Kit Sub Name 31	(0 - 127)
	00 2F	0aaa aaaa	Kit Sub Name 32	0 - 127 [ASCII]
	00 30	0aaa aaaa	Kit Sub Name 33	(0 - 127)
	00 31	0aaa aaaa	Kit Sub Name 34	0 - 127 [ASCII]
	00 32	0aaa aaaa	Kit Sub Name 35	(0 - 127)
	00 33	0aaa aaaa	Kit Sub Name 36	0 - 127 [ASCII]
	00 34	0aaa aaaa	Kit Sub Name 37	(0 - 127)
	00 35	0aaa aaaa	Kit Sub Name 38	0 - 127 [ASCII]
	00 36	0aaa aaaa	Kit Sub Name 39	(0 - 127)
	00 37	0aaa aaaa	Kit Sub Name 40	0 - 127 [ASCII]
	00 38	0aaa aaaa	Kit Sub Name 41	(0 - 127)
	00 39	0aaa aaaa	Kit Sub Name 42	0 - 127 [ASCII]
	00 3A	0aaa aaaa	Kit Sub Name 43	(0 - 127)
	00 3B	0aaa aaaa	Kit Sub Name 44	0 - 127 [ASCII]
	00 3C	0aaa aaaa	Kit Sub Name 45	(0 - 127)
	00 3D	0aaa aaaa	Kit Sub Name 46	0 - 127 [ASCII]
	00 3E	0aaa aaaa	Kit Sub Name 47	(0 - 127)
	00 3F	0aaa aaaa	Kit Sub Name 48	0 - 127 [ASCII]
	00 40	0aaa aaaa	Kit Sub Name 49	(0 - 127)
	00 41	0aaa aaaa	Kit Sub Name 50	0 - 127 [ASCII]
	00 42	0aaa aaaa	Kit Sub Name 51	(0 - 127)
	00 43	0aaa aaaa	Kit Sub Name 52	0 - 127 [ASCII]
	00 44	0aaa aaaa	Kit Sub Name 53	(0 - 127)
	00 45	0aaa aaaa	Kit Sub Name 54	0 - 127 [ASCII]
	00 46	0aaa aaaa	Kit Sub Name 55	(0 - 127)
	00 47	0aaa aaaa	Kit Sub Name 56	0 - 127 [ASCII]
	00 48	0aaa aaaa	Kit Sub Name 57	(0 - 127)
	00 49	0aaa aaaa	Kit Sub Name 58	0 - 127 [ASCII]
	00 4A	0aaa aaaa	Kit Sub Name 59	(0 - 127)
	00 4B	0aaa aaaa	Kit Sub Name 60	0 - 127 [ASCII]
	00 4C	0aaa aaaa	Kit Sub Name 61	(0 - 127)
	00 4D	0aaa aaaa	Kit Sub Name 62	0 - 127 [ASCII]
	00 4E	0aaa aaaa	Kit Sub Name 63	(0 - 127)
	00 4F	0aaa aaaa	Kit Sub Name 64	0 - 127 [ASCII]
#	00 50	0000 aaaa	Volume	(-601 - 60)
	00 51	0000 bbbb		-INF, -60.0 - +6.0 [dB]
	00 52	0000 cccc		
	00 53	0000 dddd		
#	00 54	0000 aaaa	Closed Pedal Volume	(-601 - 60)
	00 55	0000 bbbb		-INF, -60.0 - +6.0 [dB]
	00 56	0000 cccc		
	00 57	0000 dddd		
	00 58	0000 000a	Analog XStick	(0 - 1)
				OFF, ON
	00 59	0000 00aa	Strainer Lever Function	(0 - 2)
			STRAINER ON/OFF, FX CONTROL, FUNCTION OFF	
	00 5A	0000 00aa	Kit Image	(0 - 2)
				OFF, ON, GLOBAL
	00 5B	0000 00aa	Kit Name Size	(0 - 3)
			SMALL, MEDIUM, LARGE, GLOBAL	
	00 5C	0000 000a	Brush Switch	(0 - 1)
				OFF, ON
	00 5D	0000 aaaa	Kit Color	(0 - 10)
			1: WHITE, 2: RED, 3: GREEN, 4: BLUE,	
			5: LIGHT BLUE, 6: PINK, 7: PURPLE,	
			8: ORANGE, 9: YELLOW, 10: EMERALD,	
			11: CUSTOM	
#	00 5E	0000 aaaa	Red	(0 - 255)
	00 5F	0000 bbbb		0 - 255
	00 60	0000 cccc		
	00 61	0000 dddd		
#	00 62	0000 aaaa	Green	(0 - 255)
	00 63	0000 bbbb		
	00 64	0000 cccc		
	00 65	0000 dddd		

0 - 255			
#	00 66	0000 aaaa	
	00 67	0000 bbbb	
	00 68	0000 cccc	
	00 69	0000 dddd	Blue (0 - 255)
	00 6A	0000 000a	Kit Favorite Switch (0 - 1)
	00 6B	0000 aaaa	Overhead Template OFF, ON (0 - 8)
			1: NATURAL, 2: SOLID, 3: CHIC, 4: CLEAR, 5: WARM, 6: DRY, 7: DEEP, 8: NARROW, 9: PUNCHY
#	00 6C	0000 aaaa	
	00 6D	0000 bbbb	
	00 6E	0000 cccc	
	00 6F	0000 dddd	Kit Tempo (200 - 2600)
	00 70	0000 000a	Kit Tempo Switch 20.0 - 260.0 (0 - 1)
			OFF, ON
#	00 71	0000 aaaa	
	00 72	0000 bbbb	HH Open/Close Balance (-5 - 5)
	00 73	0aaa aaaa	Kit Phrase (-5 - 5)
	00 74	0000 00aa	Strainer Mode (0 - 51)
	00 75	0000 0aaa	Snare Throw Sound 1 - 52 (0 - 2)
			BEHAVIOR, ALWAYS ON, ALWAYS OFF (0 - 7) OFF, TYPE1, TYPE2, TYPE3, TYPE4, TYPE5, TYPE6, TYPE7
#	00 76	0000 aaaa	
	00 77	0000 bbbb	
	00 78	0000 cccc	
	00 79	0000 dddd	Snare Throw Volume (-601 - 60)
	00 7A	0000 000a	Snare Buzz Switch -INF, -60.0 - +6.0 [dB] (0 - 1)
			OFF, ON
#	00 7B	0000 aaaa	
	00 7C	0000 bbbb	
	00 7D	0000 cccc	
	00 7E	0000 dddd	Snare Buzz Volume (-601 - 60)
	00 7F	0000 aaaa	Strainer Knob Function -INF, -60.0 - +6.0 [dB] (0 - 9)
			OFF, SONG#, Bluetooth SONG#, CLICK TEMPO, SNARE BUZZ VOLUME, STRAINER ADJUST, SNARE TUNING, SNARE MUFFLING, LED BRIGHTNESS, LCD BRIGHTNESS
	01 00	0000 aaaa	Strainer Switch Function (0 - 9)
			OFF, DISPLAY STRAINER KNOB FUNC, SONG TOP, SONG PLAY/STOP, Bluetooth PLAY/STOP, CLICK PLAY/STOP, TAP TEMPO, SNARE BUZZ ON/OFF, SNAPSHOT SAVE, ALL SOUND OFF
#	01 01	0000 aaaa	
	01 02	0000 bbbb	
	01 03	0000 cccc	
	01 04	0000 dddd	Bus-A Send Level (-601 - 60)
			-INF, -60.0 - +6.0 [dB]
#	01 05	0000 aaaa	
	01 06	0000 bbbb	
	01 07	0000 cccc	
	01 08	0000 dddd	Bus-B Send Level (-601 - 60)
			-INF, -60.0 - +6.0 [dB]
#	01 09	0000 aaaa	
	01 0A	0000 bbbb	
	01 0B	0000 cccc	
	01 0C	0000 dddd	Bus-C Send Level (-601 - 60)
	01 0D	0000 0aaa	Bus-A Output -INF, -60.0 - +6.0 [dB] (0 - 6)
			BUS A, A+SEND B, INSERT B, A+SEND C, INSERT C, A+SEND D, INSERT D
	01 0E	0000 0aaa	Bus-B Output (0 - 4)
			BUS B, B+SEND C, INSERT C, B+SEND D, INSERT D
	01 0F	0000 00aa	Bus-C Output (0 - 2)
			BUS C, C+SEND D, INSERT D
#	01 10	0000 aaaa	
	01 11	0000 bbbb	
	01 12	0000 cccc	
	01 13	0000 dddd	Bus-A Reverb Send (-601 - 60)
			-INF, -60.0 - +6.0 [dB]
#	01 14	0000 aaaa	
	01 15	0000 bbbb	
	01 16	0000 cccc	
	01 17	0000 dddd	Bus-B Reverb Send (-601 - 60)
			-INF, -60.0 - +6.0 [dB]
#	01 18	0000 aaaa	
	01 19	0000 bbbb	
	01 1A	0000 cccc	
	01 1B	0000 dddd	Bus-C Reverb Send (-601 - 60)
			-INF, -60.0 - +6.0 [dB]
#	01 1C	0000 aaaa	
	01 1D	0000 bbbb	
	01 1E	0000 cccc	
	01 1F	0000 dddd	Bus-D Reverb Send (-601 - 60)
	01 20	0000 0aaa	Room Send Bus Select -INF, -60.0 - +6.0 [dB] (0 - 4)
			OFF, BUS A, BUS B, BUS C, BUS D
	01 21	0000 0aaa	Overhead Send Bus Select (0 - 4)
			OFF, BUS A, BUS B, BUS C, BUS D
	01 22	0000 0aaa	Reverb Send Bus Select (0 - 4)
			OFF, BUS A, BUS B, BUS C, BUS D
	01 23	0000 0aaa	Kit Resonance Send Bus Select (0 - 4)
			OFF, BUS A, BUS B, BUS C, BUS D
#	01 24	0000 aaaa	
	01 25	0000 bbbb	
	01 26	0000 cccc	
	01 27	0000 dddd	Room Bus Send Level (-601 - 60)
			-INF, -60.0 - +6.0 [dB]
#	01 28	0000 aaaa	

#	01 29	0000 bbbb	Overhead Bus Send Level	(-601 - 60) -INF, -60.0 - +6.0 [dB]
	01 2A	0000 cccc		
	01 2B	0000 dddd		
	01 2C	0000 aaaa		
#	01 2D	0000 bbbb	Reverb Bus Send Level	(-601 - 60) -INF, -60.0 - +6.0 [dB]
	01 2E	0000 cccc		
	01 2F	0000 dddd		
	01 30	0000 aaaa		
	01 31	0000 bbbb	Kit Resonance Bus Send Level	(-601 - 60) -INF, -60.0 - +6.0 [dB]
	01 32	0000 cccc		
	01 33	0000 dddd		
	01 34	0000 00aa		
	01 35	0000 00aa	Strainer Lever Overhead Control	(0 - 2) DISABLE, LEVER ON, LEVER OFF
	01 36	0000 00aa	Strainer Lever Room Control	(0 - 2) DISABLE, LEVER ON, LEVER OFF
	01 37	0000 00aa	Strainer Lever Reverb Control	(0 - 2) DISABLE, LEVER ON, LEVER OFF
	01 38	0000 00aa	Strainer Lever Kit Reso Control	(0 - 2) DISABLE, LEVER ON, LEVER OFF
	01 39	0000 00aa	Strainer Lever BUS A FX1 Control	(0 - 2) DISABLE, LEVER ON, LEVER OFF
	01 3A	0000 00aa	Strainer Lever BUS A FX2 Control	(0 - 2) DISABLE, LEVER ON, LEVER OFF
	01 3B	0000 00aa	Strainer Lever BUS B FX1 Control	(0 - 2) DISABLE, LEVER ON, LEVER OFF
	01 3C	0000 00aa	Strainer Lever BUS B FX2 Control	(0 - 2) DISABLE, LEVER ON, LEVER OFF
	01 3D	0000 00aa	Strainer Lever BUS C FX1 Control	(0 - 2) DISABLE, LEVER ON, LEVER OFF
	01 3E	0000 00aa	Strainer Lever BUS C FX2 Control	(0 - 2) DISABLE, LEVER ON, LEVER OFF
	01 3F	0000 00aa	Strainer Lever BUS D FX1 Control	(0 - 2) DISABLE, LEVER ON, LEVER OFF
	01 40	0000 00aa	Strainer Lever BUS D FX2 Control	(0 - 2) DISABLE, LEVER ON, LEVER OFF
00 00 01 41 Total Size				

* [KitMidi]

Offset	Address	Description
#	00 00	0000 aaaa
	00 01	0000 bbbb
	00 02	0000 cccc
	00 03	0000 dddd
#	00 04	0000 aaaa
	00 05	0000 bbbb
	00 06	0000 cccc
	00 07	0000 dddd
#	00 08	0000 aaaa
	00 09	0000 bbbb
	00 0A	0000 cccc
	00 0B	0000 dddd
#	00 0C	0000 aaaa
	00 0D	0000 bbbb
	00 0E	0000 cccc
	00 0F	0000 dddd
#	00 10	0000 aaaa
	00 11	0000 bbbb
	00 12	0000 cccc
	00 13	0000 dddd
#	00 14	0000 aaaa
	00 15	0000 bbbb
	00 16	0000 cccc
	00 17	0000 dddd
#	00 18	0000 aaaa
	00 19	0000 bbbb
	00 1A	0000 cccc
	00 1B	0000 dddd
#	00 1C	0000 aaaa
	00 1D	0000 bbbb
	00 1E	0000 cccc
	00 1F	0000 dddd
#	00 20	0000 aaaa
	00 21	0000 bbbb
	00 22	0000 cccc
	00 23	0000 dddd
#	00 24	0000 aaaa
	00 25	0000 bbbb
	00 26	0000 cccc
	00 27	0000 dddd
#	00 28	0000 aaaa
	00 29	0000 bbbb
	00 2A	0000 cccc
	00 2B	0000 dddd
#	00 2C	0000 aaaa
	00 2D	0000 bbbb
	00 2E	0000 cccc

	00 2F	0000 dddd	Note Tom1 Head	(0 - 128) 0 - 127, OFF
#	00 30	0000 aaaa		
	00 31	0000 bbbb		
	00 32	0000 cccc		
	00 33	0000 dddd	Note Tom1 Rim	(0 - 128) 0 - 127, OFF
#	00 34	0000 aaaa		
	00 35	0000 bbbb		
	00 36	0000 cccc		
	00 37	0000 dddd	Note Tom2 Head	(0 - 128) 0 - 127, OFF
#	00 38	0000 aaaa		
	00 39	0000 bbbb		
	00 3A	0000 cccc		
	00 3B	0000 dddd	Note Tom2 Rim	(0 - 128) 0 - 127, OFF
#	00 3C	0000 aaaa		
	00 3D	0000 bbbb		
	00 3E	0000 cccc		
	00 3F	0000 dddd	Note Tom3 Head	(0 - 128) 0 - 127, OFF
#	00 40	0000 aaaa		
	00 41	0000 bbbb		
	00 42	0000 cccc		
	00 43	0000 dddd	Note Tom3 Rim	(0 - 128) 0 - 127, OFF
#	00 44	0000 aaaa		
	00 45	0000 bbbb		
	00 46	0000 cccc		
	00 47	0000 dddd	Note Tom4 Head	(0 - 128) 0 - 127, OFF
#	00 48	0000 aaaa		
	00 49	0000 bbbb		
	00 4A	0000 cccc		
	00 4B	0000 dddd	Note Tom4 Rim	(0 - 128) 0 - 127, OFF
#	00 4C	0000 aaaa		
	00 4D	0000 bbbb		
	00 4E	0000 cccc		
	00 4F	0000 dddd	Note Hi-Hat Open Head	(0 - 128) 0 - 127, OFF
#	00 50	0000 aaaa		
	00 51	0000 bbbb		
	00 52	0000 cccc		
	00 53	0000 dddd	Note Hi-Hat Open Rim	(0 - 128) 0 - 127, OFF
#	00 54	0000 aaaa		
	00 55	0000 bbbb		
	00 56	0000 cccc		
	00 57	0000 dddd	Note Hi-Hat Close Head	(0 - 128) 0 - 127, OFF
#	00 58	0000 aaaa		
	00 59	0000 bbbb		
	00 5A	0000 cccc		
	00 5B	0000 dddd	Note Hi-Hat Close Rim	(0 - 128) 0 - 127, OFF
#	00 5C	0000 aaaa		
	00 5D	0000 bbbb		
	00 5E	0000 cccc		
	00 5F	0000 dddd	Note Hi-Hat Closed Pedal	(0 - 128) 0 - 127, OFF
#	00 60	0000 aaaa		
	00 61	0000 bbbb		
	00 62	0000 cccc		
	00 63	0000 dddd	Note Crash1 Head	(0 - 128) 0 - 127, OFF
#	00 64	0000 aaaa		
	00 65	0000 bbbb		
	00 66	0000 cccc		
	00 67	0000 dddd	Note Crash1 Rim	(0 - 128) 0 - 127, OFF
#	00 68	0000 aaaa		
	00 69	0000 bbbb		
	00 6A	0000 cccc		
	00 6B	0000 dddd	Note Crash2 Head	(0 - 128) 0 - 127, OFF
#	00 6C	0000 aaaa		
	00 6D	0000 bbbb		
	00 6E	0000 cccc		
	00 6F	0000 dddd	Note Crash2 Rim	(0 - 128) 0 - 127, OFF
#	00 70	0000 aaaa		
	00 71	0000 bbbb		
	00 72	0000 cccc		
	00 73	0000 dddd	Note Ride Head	(0 - 128) 0 - 127, OFF
#	00 74	0000 aaaa		
	00 75	0000 bbbb		
	00 76	0000 cccc		
	00 77	0000 dddd	Note Ride Rim	(0 - 128) 0 - 127, OFF
#	00 78	0000 aaaa		
	00 79	0000 bbbb		
	00 7A	0000 cccc		
	00 7B	0000 dddd	Note Ride Bell	(0 - 128) 0 - 127, OFF
#	00 7C	0000 aaaa		
	00 7D	0000 bbbb		
	00 7E	0000 cccc		
	00 7F	0000 dddd	Note Aux1 Head	(0 - 128) 0 - 127, OFF
#	01 00	0000 aaaa		
	01 01	0000 bbbb		
	01 02	0000 cccc		
	01 03	0000 dddd	Note Aux1 Rim	(0 - 128) 0 - 127, OFF

#	01 04	0000 aaaa		
	01 05	0000 bbbb		
	01 06	0000 cccc		
	01 07	0000 dddd	Note Aux2 Head	(0 - 128) 0 - 127, OFF
#	01 08	0000 aaaa		
	01 09	0000 bbbb		
	01 0A	0000 cccc		
	01 0B	0000 dddd	Note Aux2 Rim	(0 - 128) 0 - 127, OFF
#	01 0C	0000 aaaa		
	01 0D	0000 bbbb		
	01 0E	0000 cccc		
	01 0F	0000 dddd	Note Aux3 Head	(0 - 128) 0 - 127, OFF
#	01 10	0000 aaaa		
	01 11	0000 bbbb		
	01 12	0000 cccc		
	01 13	0000 dddd	Note Aux3 Rim	(0 - 128) 0 - 127, OFF
#	01 14	0000 aaaa		
	01 15	0000 bbbb		
	01 16	0000 cccc		
	01 17	0000 dddd	Note Aux4 Head	(0 - 128) 0 - 127, OFF
#	01 18	0000 aaaa		
	01 19	0000 bbbb		
	01 1A	0000 cccc		
	01 1B	0000 dddd	Note Aux4 Rim	(0 - 128) 0 - 127, OFF
	01 1C	0aaa aaaa	Gate Time Kick	(1 - 80) 0.1 - 8.0 [s]
	01 1D	0aaa aaaa	Gate Time Snare Head	(1 - 80) 0.1 - 8.0 [s]
	01 1E	0aaa aaaa	Gate Time Snare Rim	(1 - 80) 0.1 - 8.0 [s]
	01 1F	0aaa aaaa	Gate Time Tom1 Head	(1 - 80) 0.1 - 8.0 [s]
	01 20	0aaa aaaa	Gate Time Tom1 Rim	(1 - 80) 0.1 - 8.0 [s]
	01 21	0aaa aaaa	Gate Time Tom2 Head	(1 - 80) 0.1 - 8.0 [s]
	01 22	0aaa aaaa	Gate Time Tom2 Rim	(1 - 80) 0.1 - 8.0 [s]
	01 23	0aaa aaaa	Gate Time Tom3 Head	(1 - 80) 0.1 - 8.0 [s]
	01 24	0aaa aaaa	Gate Time Tom3 Rim	(1 - 80) 0.1 - 8.0 [s]
	01 25	0aaa aaaa	Gate Time Tom4 Head	(1 - 80) 0.1 - 8.0 [s]
	01 26	0aaa aaaa	Gate Time Tom4 Rim	(1 - 80) 0.1 - 8.0 [s]
	01 27	0aaa aaaa	Gate Time Hi-Hat Head	(1 - 80) 0.1 - 8.0 [s]
	01 28	0aaa aaaa	Gate Time Hi-Hat Rim	(1 - 80) 0.1 - 8.0 [s]
	01 29	0aaa aaaa	Gate Time Crash1 Head	(1 - 80) 0.1 - 8.0 [s]
	01 2A	0aaa aaaa	Gate Time Crash1 Rim	(1 - 80) 0.1 - 8.0 [s]
	01 2B	0aaa aaaa	Gate Time Crash2 Head	(1 - 80) 0.1 - 8.0 [s]
	01 2C	0aaa aaaa	Gate Time Crash2 Rim	(1 - 80) 0.1 - 8.0 [s]
	01 2D	0aaa aaaa	Gate Time Ride Head	(1 - 80) 0.1 - 8.0 [s]
	01 2E	0aaa aaaa	Gate Time Ride Rim	(1 - 80) 0.1 - 8.0 [s]
	01 2F	0aaa aaaa	Gate Time Ride Bell	(1 - 80) 0.1 - 8.0 [s]
	01 30	0aaa aaaa	Gate Time Aux1 Head	(1 - 80) 0.1 - 8.0 [s]
	01 31	0aaa aaaa	Gate Time Aux1 Rim	(1 - 80) 0.1 - 8.0 [s]
	01 32	0aaa aaaa	Gate Time Aux2 Head	(1 - 80) 0.1 - 8.0 [s]
	01 33	0aaa aaaa	Gate Time Aux2 Rim	(1 - 80) 0.1 - 8.0 [s]
	01 34	0aaa aaaa	Gate Time Aux3 Head	(1 - 80) 0.1 - 8.0 [s]
	01 35	0aaa aaaa	Gate Time Aux3 Rim	(1 - 80) 0.1 - 8.0 [s]
	01 36	0aaa aaaa	Gate Time Aux4 Head	(1 - 80) 0.1 - 8.0 [s]
	01 37	0aaa aaaa	Gate Time Aux4 Rim	(1 - 80) 0.1 - 8.0 [s]
	01 38	000a aaaa	Channel Kick	(0 - 16) Channel 1 - 16, GLOBAL
	01 39	000a aaaa	Channel Snare Head	(0 - 16) Channel 1 - 16, GLOBAL
	01 3A	000a aaaa	Channel Snare Rim	(0 - 16) Channel 1 - 16, GLOBAL
	01 3B	000a aaaa	Channel Tom1 Head	(0 - 16) Channel 1 - 16, GLOBAL
	01 3C	000a aaaa	Channel Tom1 Rim	(0 - 16) Channel 1 - 16, GLOBAL
	01 3D	000a aaaa	Channel Tom2 Head	(0 - 16) Channel 1 - 16, GLOBAL
	01 3E	000a aaaa	Channel Tom2 Rim	(0 - 16) Channel 1 - 16, GLOBAL
	01 3F	000a aaaa	Channel Tom3 Head	(0 - 16) Channel 1 - 16, GLOBAL
	01 40	000a aaaa	Channel Tom3 Rim	(0 - 16) Channel 1 - 16, GLOBAL
	01 41	000a aaaa	Channel Tom4 Head	(0 - 16) Channel 1 - 16, GLOBAL
	01 42	000a aaaa	Channel Tom4 Rim	(0 - 16) Channel 1 - 16, GLOBAL

01 43	000a aaaa	Channel Hh Head	Channel 1 - 16, GLOBAL (0 - 16)
01 44	000a aaaa	Channel Hh Rim	Channel 1 - 16, GLOBAL (0 - 16)
01 45	000a aaaa	Channel Crash1 Head	Channel 1 - 16, GLOBAL (0 - 16)
01 46	000a aaaa	Channel Crash1 Rim	Channel 1 - 16, GLOBAL (0 - 16)
01 47	000a aaaa	Channel Crash2 Head	Channel 1 - 16, GLOBAL (0 - 16)
01 48	000a aaaa	Channel Crash2 Rim	Channel 1 - 16, GLOBAL (0 - 16)
01 49	000a aaaa	Channel Ride Head	Channel 1 - 16, GLOBAL (0 - 16)
01 4A	000a aaaa	Channel Ride Rim	Channel 1 - 16, GLOBAL (0 - 16)
01 4B	000a aaaa	Channel Ride Bell	Channel 1 - 16, GLOBAL (0 - 16)
01 4C	000a aaaa	Channel Aux1 Head	Channel 1 - 16, GLOBAL (0 - 16)
01 4D	000a aaaa	Channel Aux1 Rim	Channel 1 - 16, GLOBAL (0 - 16)
01 4E	000a aaaa	Channel Aux2 Head	Channel 1 - 16, GLOBAL (0 - 16)
01 4F	000a aaaa	Channel Aux2 Rim	Channel 1 - 16, GLOBAL (0 - 16)
01 50	000a aaaa	Channel Aux3 Head	Channel 1 - 16, GLOBAL (0 - 16)
01 51	000a aaaa	Channel Aux3 Rim	Channel 1 - 16, GLOBAL (0 - 16)
01 52	000a aaaa	Channel Aux4 Head	Channel 1 - 16, GLOBAL (0 - 16)
01 53	000a aaaa	Channel Aux4 Rim	Channel 1 - 16, GLOBAL (0 - 16)
00 00 01 54	Total Size		

* [KitMasterComp]

Offset Address	Description		
00 00	0000 000a	Kit Comp Switch	(0 - 1) OFF, ON
00 01	0000 000a	Kit Comp Type	(0 - 1) STANDARD, FETCOMP-76
# 00 02	0000 aaaa	Template (Type: STANDARD)	(0 - 7) SINGLE SOFT COMP, SINGLE HARD COMP, SINGLE LIMITER, SINGLE PARALLEL, 2 BAND SOFT COMP, 2 BAND HARD COMP, 2 BAND LIMITER, 2 BAND PARALLEL
00 03	0000 bbbb		
# 00 04	0000 aaaa	Template (Type: FETCOMP-76)	(0 - 3) PRESENCE, SOFT, MID, HEAVY
00 05	0000 bbbb		
# 00 06	0000 aaaa	Comp Parameter 1	(-20000 - 20000)
00 07	0000 bbbb		
00 08	0000 cccc		
00 09	0000 dddd		
# 00 0A	0000 aaaa	Comp Parameter 2	(-20000 - 20000)
00 0B	0000 bbbb		
00 0C	0000 cccc		
00 0D	0000 dddd		
# 00 0E	0000 aaaa	Comp Parameter 3	(-20000 - 20000)
00 0F	0000 bbbb		
00 10	0000 cccc		
00 11	0000 dddd		
# 00 12	0000 aaaa	Comp Parameter 4	(-20000 - 20000)
00 13	0000 bbbb		
00 14	0000 cccc		
00 15	0000 dddd		
# 00 16	0000 aaaa	Comp Parameter 5	(-20000 - 20000)
00 17	0000 bbbb		
00 18	0000 cccc		
00 19	0000 dddd		
# 00 1A	0000 aaaa	Comp Parameter 6	(-20000 - 20000)
00 1B	0000 bbbb		
00 1C	0000 cccc		
00 1D	0000 dddd		
# 00 1E	0000 aaaa	Comp Parameter 7	(-20000 - 20000)
00 1F	0000 bbbb		
00 20	0000 cccc		
00 21	0000 dddd		
# 00 22	0000 aaaa	Comp Parameter 8	(-20000 - 20000)
00 23	0000 bbbb		
00 24	0000 cccc		
00 25	0000 dddd		
# 00 26	0000 aaaa	Comp Parameter 9	(-20000 - 20000)
00 27	0000 bbbb		
00 28	0000 cccc		
00 29	0000 dddd		
# 00 2A	0000 aaaa	Comp Parameter 10	(-20000 - 20000)
00 2B	0000 bbbb		
00 2C	0000 cccc		
00 2D	0000 dddd		
# 00 2E	0000 aaaa	Comp Parameter 11	(-20000 - 20000)
00 2F	0000 bbbb		
00 30	0000 cccc		
00 31	0000 dddd		
# 00 32	0000 aaaa	Comp Parameter 12	(-20000 - 20000)
00 33	0000 bbbb		
00 34	0000 cccc		
00 35	0000 dddd		
# 00 36	0000 aaaa		
00 37	0000 bbbb		

#	00 38	0000 cccc	Comp Parameter 13	(-20000 - 20000)
	00 39	0000 dddd		
	00 3A	0000 aaaa		
	00 3B	0000 bbbb		
#	00 3C	0000 cccc	Comp Parameter 14	(-20000 - 20000)
	00 3D	0000 dddd		
	00 3E	0000 aaaa		
	00 3F	0000 bbbb		
#	00 40	0000 cccc	Comp Parameter 15	(-20000 - 20000)
	00 41	0000 dddd		
	00 42	0000 aaaa		
	00 43	0000 bbbb		
#	00 44	0000 cccc	Comp Parameter 16	(-20000 - 20000)
	00 45	0000 dddd		
00 00 00 46		Total Size		

* [KitMasterEQ]

Offset Address		Description		
#	00 00	0000 000a	Kit EQ Switch	(0 - 1) OFF, ON
	00 01	0000 aaaa	Mid Input Gain	(-12 - 12)
	00 02	0000 bbbb		-12 - +12 [dB]
	00 03	0000 000a	Low EQ Type	(0 - 1) SHELV, PEAK
#	00 04	00aa aaaa	Low Freq	(0 - 34) 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz
	00 05	0000 0aaa	Low Q	(0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 06	0000 aaaa	Low Gain	(-12 - 12)
	00 07	0000 bbbb		-12 - +12 [dB]
#	00 08	00aa aaaa	Mid 1 Freq	(0 - 58) 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
	00 09	0000 0aaa	Mid 1 Q	(0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 0A	0000 aaaa	Mid 1 Gain	(-12 - 12)
	00 0B	0000 bbbb		-12 - +12 [dB]
#	00 0C	00aa aaaa	Mid 2 Freq	(0 - 58) 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
	00 0D	0000 0aaa	Mid 2 Q	(0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 0E	0000 aaaa	Mid 2 Gain	(-12 - 12)
	00 0F	0000 bbbb		-12 - +12 [dB]
#	00 10	0000 000a	High EQ Type	(0 - 1) SHELV, PEAK
	00 11	000a aaaa	High Freq	(0 - 24) 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
	00 12	0000 0aaa	High Q	(0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 13	0000 aaaa	High Gain	(-12 - 12)
#	00 14	0000 bbbb		-12 - +12 [dB]
	00 15	0000 000a	Mid/Side Switch	(0 - 1) OFF, ON
	00 16	0000 aaaa	Side Input Gain	(-12 - 12)
#	00 17	0000 bbbb		-12 - +12 [dB]
	00 18	0000 000a	Side Low EQ Type	(0 - 1) SHELV, PEAK
	00 19	00aa aaaa	Side Low Freq	(0 - 34) 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz

#	00 1A	0000 0aaa	Side Low Q	(0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 1B	0000 aaaa	Side Low Gain	(-12 - 12)
	00 1C	0000 bbbb		-12 - +12 [dB]
	00 1D	00aa aaaa	Side Mid 1 Freq	(0 - 58) 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
#	00 1E	0000 0aaa	Side Mid 1 Q	(0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 1F	0000 aaaa	Side Mid 1 Gain	(-12 - 12)
	00 20	0000 bbbb		-12 - +12 [dB]
	00 21	00aa aaaa	Side Mid 2 Freq	(0 - 58) 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
#	00 22	0000 0aaa	Side Mid 2 Q	(0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 23	0000 aaaa	Side Mid 2 Gain	(-12 - 12)
	00 24	0000 bbbb		-12 - +12 [dB]
	00 25	0000 000a	Side High EQ Type	(0 - 1) SHELV, PEAK
#	00 26	000a aaaa	Side High Freq	(0 - 24) 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
	00 27	0000 0aaa	Side High Q	(0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 28	0000 aaaa	Side High Gain	(-12 - 12)
	00 29	0000 bbbb		-12 - +12 [dB]
00 00 00 2A			Total Size	

* [KitFx]

Offset	Address	Description
	00 00	0aaa aaaa Bus Fx Type (0 - 94) THRU, EQUALIZER, MID SIDE EQ, SPECTRUM, ISOLATOR, LOW BOOST, SUPER FILTER, MULTI MODE FILTER, STEP FILTER, ENHANCER, EXCITER, AUTO WAH, HUMANIZER, PHASER, SMALL PHASER, SCRIPT 90, SCRIPT 100, STEP PHASER, MLT STAGE PHASER, INFINITE PHASER, FLANGER, SBF-325, STEP FLANGER, CHORUS, HEXA-CHORUS, TREM CHORUS, SPACE-D, CE-1, SDD-320, JUNO CHORUS, RING MODULATOR, TREMOLO, AUTO PAN, SLICER, ROTARY, VK ROTARY, OVERDRIVE, DISTORTION, T-SCREAM, FUZZ, TONE FATTENER, HMS DISTORTION, SATURATOR, DRUM SATURATOR, WARM SATURATOR, GUITAR AMP SIMULATOR, EP AMP SIMULATOR, SPEAKER SIMULATOR, COMPRESSOR, FETCOMP-78, MID SIDE COMPRESSOR, LIMITER, SUSTAINER, TRANSIENT, GATE, DELAY, MOD DELAY, 2TAP PAN DELAY, 3TAP PAN DELAY, 4TAP PAN DELAY, MULTI TAP DELAY, REVERSE DELAY, TIME CTRL DELAY, TAPE ECHO, MID SIDE DELAY, BPM LOOPER, LOFI COMP, BIT CRUSHER, PHONOGRAPH, PITCH SHIFTER, 2V PITCH SHIFTER, OD->CHORUS, OD->FLANGER, OD->DELAY, DS->CHORUS, DS->FLANGER, DS->DELAY, OD/DS->TWAH, OD/DS->AWAH, GT AMP->CHORUS, GT AMP->FLANGER, GT AMP->PHASER, GT AMP->DELAY, EP AMP->TREMOLO, EP AMP->CHORUS, EP AMP->FLANGER, EP AMP->PHASER, EP AMP->DELAY, EH->CHORUS, EH->FLANGER, EH->DELAY, CHO->DELAY, FLG->DELAY, CHO->FLANGER, JD-MULTI
	00 01	0000 000a Bus Fx Switch (0 - 1) OFF, ON
#	00 02	0000 aaaa
	00 03	0000 bbbb
	00 04	0000 cccc
#	00 05	0000 dddd FX Parameter 1 (-20000 - 20000)
	00 06	0000 aaaa
	00 07	0000 bbbb
	00 08	0000 cccc
#	00 09	0000 dddd FX Parameter 2 (-20000 - 20000)
	00 0A	0000 aaaa
	00 0B	0000 bbbb
	00 0C	0000 cccc

#	00 0D	0000 dddd	FX Parameter 3	(-20000 - 20000)
	00 0E	0000 aaaa		
	00 0F	0000 bbbb		
	00 10	0000 cccc		
#	00 11	0000 dddd	FX Parameter 4	(-20000 - 20000)
	00 12	0000 aaaa		
	00 13	0000 bbbb		
	00 14	0000 cccc		
#	00 15	0000 dddd	FX Parameter 5	(-20000 - 20000)
	00 16	0000 aaaa		
	00 17	0000 bbbb		
	00 18	0000 cccc		
#	00 19	0000 dddd	FX Parameter 6	(-20000 - 20000)
	00 1A	0000 aaaa		
	00 1B	0000 bbbb		
	00 1C	0000 cccc		
#	00 1D	0000 dddd	FX Parameter 7	(-20000 - 20000)
	00 1E	0000 aaaa		
	00 1F	0000 bbbb		
	00 20	0000 cccc		
#	00 21	0000 dddd	FX Parameter 8	(-20000 - 20000)
	00 22	0000 aaaa		
	00 23	0000 bbbb		
	00 24	0000 cccc		
#	00 25	0000 dddd	FX Parameter 9	(-20000 - 20000)
	00 26	0000 aaaa		
	00 27	0000 bbbb		
	00 28	0000 cccc		
#	00 29	0000 dddd	FX Parameter 10	(-20000 - 20000)
	00 2A	0000 aaaa		
	00 2B	0000 bbbb		
	00 2C	0000 cccc		
#	00 2D	0000 dddd	FX Parameter 11	(-20000 - 20000)
	00 2E	0000 aaaa		
	00 2F	0000 bbbb		
	00 30	0000 cccc		
#	00 31	0000 dddd	FX Parameter 12	(-20000 - 20000)
	00 32	0000 aaaa		
	00 33	0000 bbbb		
	00 34	0000 cccc		
#	00 35	0000 dddd	FX Parameter 13	(-20000 - 20000)
	00 36	0000 aaaa		
	00 37	0000 bbbb		
	00 38	0000 cccc		
#	00 39	0000 dddd	FX Parameter 14	(-20000 - 20000)
	00 3A	0000 aaaa		
	00 3B	0000 bbbb		
	00 3C	0000 cccc		
#	00 3D	0000 dddd	FX Parameter 15	(-20000 - 20000)
	00 3E	0000 aaaa		
	00 3F	0000 bbbb		
	00 40	0000 cccc		
#	00 41	0000 dddd	FX Parameter 16	(-20000 - 20000)
	00 42	0000 aaaa		
	00 43	0000 bbbb		
	00 44	0000 cccc		
#	00 45	0000 dddd	FX Parameter 17	(-20000 - 20000)
	00 46	0000 aaaa		
	00 47	0000 bbbb		
	00 48	0000 cccc		
#	00 49	0000 dddd	FX Parameter 18	(-20000 - 20000)
	00 4A	0000 aaaa		
	00 4B	0000 bbbb		
	00 4C	0000 cccc		
#	00 4D	0000 dddd	FX Parameter 19	(-20000 - 20000)
	00 4E	0000 aaaa		
	00 4F	0000 bbbb		
	00 50	0000 cccc		
#	00 51	0000 dddd	FX Parameter 20	(-20000 - 20000)
	00 52	0000 aaaa		
	00 53	0000 bbbb		
	00 54	0000 cccc		
#	00 55	0000 dddd	FX Parameter 21	(-20000 - 20000)
	00 56	0000 aaaa		
	00 57	0000 bbbb		
	00 58	0000 cccc		
#	00 59	0000 dddd	FX Parameter 22	(-20000 - 20000)
	00 5A	0000 aaaa		
	00 5B	0000 bbbb		
	00 5C	0000 cccc		
#	00 5D	0000 dddd	FX Parameter 23	(-20000 - 20000)
	00 5E	0000 aaaa		
	00 5F	0000 bbbb		
	00 60	0000 cccc		
#	00 61	0000 dddd	FX Parameter 24	(-20000 - 20000)
	00 62	0000 aaaa		
	00 63	0000 bbbb		
	00 64	0000 cccc		
#	00 65	0000 dddd	FX Parameter 25	(-20000 - 20000)
	00 66	0000 aaaa		
	00 67	0000 bbbb		
	00 68	0000 cccc		
#	00 69	0000 dddd	FX Parameter 26	(-20000 - 20000)
	00 6A	0000 aaaa		
	00 6B	0000 bbbb		
	00 6C	0000 cccc		
#	00 6D	0000 dddd	FX Parameter 27	(-20000 - 20000)
	00 6E	0000 aaaa		
	00 6F	0000 bbbb		
	00 70	0000 cccc		
#	00 71	0000 dddd	FX Parameter 28	(-20000 - 20000)
	00 72	0000 aaaa		
	00 73	0000 bbbb		
	00 74	0000 cccc		
#	00 75	0000 dddd	FX Parameter 29	(-20000 - 20000)
	00 76	0000 aaaa		
	00 77	0000 bbbb		

#	00 78	0000 cccc	FX Parameter 30	(-20000 - 20000)
	00 79	0000 dddd		
	00 7A	0000 aaaa		
	00 7B	0000 bbbb		
#	00 7C	0000 cccc	FX Parameter 31	(-20000 - 20000)
	00 7D	0000 dddd		
	00 7E	0000 aaaa		
	00 7F	0000 bbbb		
	01 00	0000 cccc	FX Parameter 32	(-20000 - 20000)
	01 01	0000 dddd		
00 00 01 02		Total Size		

* [KitUnitCommon]

Offset		Address			Description
#	00 00	0000	00aa	Layer Mode	(0 - 2) MIX, VELOCITY, HI-HAT
	00 01	0000	aaaa	Minimum Volume	(0 - 15) 0 - 15
	00 02	0000	aaaa	Volume	(-601 - 60) -INF, -60.0 - +6.0 [dB]
	00 03	0000	bbbb		
	00 04	0000	cccc		
	00 05	0000	dddd		
	00 06	0000	aaaa	Mute Group Send	(0 - 8)
	00 07	0000	aaaa	Mute Group Receive	OFF, 1 - 8 (0 - 8)
	00 08	0000	000a	Pad EQ Switch	OFF, 1 - 8 (0 - 1)
	00 09	00aa	aaaa	Pad EQ Low Cut	OFF, ON (0 - 35)
	00 0A	00aa	aaaa	Pad EQ Low Freq	OFF, 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz (0 - 34)
#	00 0B	0000	aaaa	Pad EQ Low Gain	20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz (-24 - 24) -24 - +24 (dB)
	00 0C	0000	bbbb		
	00 0D	00aa	aaaa		
	00 0E	0000	0aaa		
#	00 0F	0000	aaaa	Pad EQ Mid 1 Freq	20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz (0 - 58)
	00 10	0000	bbbb		
	00 11	00aa	aaaa		
	00 12	0000	0aaa		
#	00 13	0000	aaaa	Pad EQ Mid 1 Q	0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0 (0 - 6)
	00 14	0000	bbbb		
	00 15	000a	aaaa		
	00 16	0000	0aaa		
#	00 17	0000	aaaa	Pad EQ Mid 1 Gain	(-24 - 24) -24 - +24 (dB)
	00 18	0000	bbbb		
	00 19	000a	aaaa		
	00 1A	0000	0aaa		
#	00 1B	0000	aaaa	Pad EQ Mid 2 Freq	20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz (0 - 58)
	00 1C	0000	bbbb		
	00 1D	000a	aaaa		
	00 1E	0000	0aaa		
#	00 1F	0000	aaaa	Pad EQ Mid 2 Q	0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0 (0 - 6)
	00 20	0000	bbbb		
	00 21	000a	aaaa		
	00 22	0000	0aaa		
#	00 23	0000	aaaa	Pad EQ Mid 2 Gain	(-24 - 24) -24 - +24 (dB)
	00 24	0000	bbbb		
	00 25	000a	aaaa		
	00 26	0000	0aaa		
#	00 27	0000	aaaa	Pad EQ High Freq	1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz (0 - 24)
	00 28	0000	bbbb		
	00 29	000a	aaaa		
	00 2A	0000	0aaa		
#	00 2B	0000	aaaa	Pad EQ High Gain	(-24 - 24) -24 - +24 (dB)
	00 2C	0000	bbbb		
	00 2D	000a	aaaa		
	00 2E	0000	0aaa		
#	00 2F	0000	aaaa	Snare Buzz Sens	(0 - 12) OFF, 1 - 12
	00 30	0000	bbbb		
	00 31	000a	aaaa		
	00 32	0000	0aaa		
#	00 33	0000	aaaa	Output Routing	(0 - 8) DRUM, DRUM + SEND BUS A, INSERT TO BUS A, DRUM + SEND BUS B, INSERT TO BUS B, DRUM + SEND BUS C, INSERT TO BUS C, DRUM + SEND BUS D, INSERT TO BUS D
	00 34	0000	bbbb		
	00 35	000a	aaaa		
	00 36	0000	0aaa		

	00 1C	0000 cccc		
	00 1D	0000 dddd	Bus Send Level	(-601 - 60)
				-INF, -60.0 - +6.0 [dB]
#	00 1E	0000 aaaa		
	00 1F	0000 bbbb	Pedal Bend Range	(-24 - 24)
				-24 - 24
	00 20	0000 00aa	Position Control	(0 - 2)
				OFF, ON, ON (Rim Click OFF)
	00 21	0000 aaaa	Position Area	(0 - 10)
				INSIDE -5 - -1, DEFAULT, OUTSIDE +1 - +5
	00 22	0000 0aaa	Overhead Send Filter Select	(0 - 6)
				THRU, FILTER 1 - 6
#	00 23	0000 aaaa		
	00 24	0000 bbbb		
	00 25	0000 cccc		
	00 26	0000 dddd	Overhead Send Level	(-601 - 60)
				-INF, -60.0 - +6.0 [dB]
#	00 27	0000 aaaa		
	00 28	0000 bbbb		
	00 29	0000 cccc		
	00 2A	0000 dddd	Room Send Level	(-601 - 60)
				-INF, -60.0 - +6.0 [dB]
#	00 2B	0000 aaaa		
	00 2C	0000 bbbb		
	00 2D	0000 cccc		
	00 2E	0000 dddd	Reverb Send Level	(-601 - 60)
				-INF, -60.0 - +6.0 [dB]
#	00 2F	0000 aaaa		
	00 30	0000 bbbb		
	00 31	0000 cccc		
	00 32	0000 dddd	Kit Resonance Send Level	(-601 - 60)
				-INF, -60.0 - +6.0 [dB]
	00 33	0000 aaaa	Buzz Muffling	(0 - 9)
				OFF, 1 - 8, MAX
00 00 00 34 Total Size				

* [KitUnitLayer]

Offset Address		Description		
	00 00	0000 000a	Inst Switch	(0 - 1)
				OFF, ON
#	00 01	0000 aaaa		
	00 02	0000 bbbb		
	00 03	0000 cccc		
	00 04	0000 dddd	Instrument	(0 -)
#	00 05	0000 aaaa		
	00 06	0000 bbbb		
	00 07	0000 cccc		
	00 08	0000 dddd	Inst Bank	(0 -)
#	00 09	0000 aaaa		
	00 0A	0000 bbbb		
	00 0B	0000 cccc		
	00 0C	0000 dddd	Volume	(-601 - 60)
				-INF, -60.0 - +6.0 [dB]
	00 0D	0000 000a	Transient Switch	(0 - 1)
				OFF, ON
	00 0E	0000 aaaa	Transient Attack Time	(1 - 10)
				1 - 10
#	00 0F	0000 aaaa		
	00 10	0000 bbbb	Transient Attack Depth	(-100 - 100)
				-100 - +100
#	00 11	0000 aaaa		
	00 12	0000 bbbb	Transient Release Depth	(-100 - 100)
				-100 - +100
#	00 13	0000 aaaa		
	00 14	0000 bbbb	Transient Gain	(-120 - 60)
				-12.0 - +6.0 [dB]
	00 15	0000 00aa	User Sample Transient Type	(0 - 3)
				Type 1 - 4
				1 - 4
	00 16	0000 00aa	Transient Attack Type	(0 - 2)
				NORMAL, WIDE1, WIDE2
#	00 17	0000 aaaa		
	00 18	0000 bbbb		
	00 19	0000 cccc		
	00 1A	0000 dddd	Inst Pitch	(-4800 - 4800)
				-4800 - +4800
	00 1B	0aaa aaaa	Inst Decay	(1 - 100)
				1 - 100
#	00 1C	0000 aaaa		
	00 1D	0000 bbbb	Inst Pitch Sweep	(-100 - 100)
				-100 - +100
	00 1E	0000 00aa	Dynamic Enhancer	(0 - 2)
				OFF, NORMAL, WIDE
	00 1F	0000 000a	Dynamics	(0 - 1)
				FIXED, FADE
	00 20	0aaa aaaa	Threshold	(1 - 127)
				1 - 127
	00 21	0000 000a	Layer EQ Switch	(0 - 1)
				OFF, ON
	00 22	00aa aaaa	Layer EQ Low Freq	(0 - 34)
				20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz,
				35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz,
				63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz,
				112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz,
				200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz,
				357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz,
				630Hz, 715Hz, 800Hz, 900Hz, 1kHz
#	00 23	0000 aaaa		
	00 24	0000 bbbb	Layer EQ Low Gain	(-24 - 24)
				-24 - +24 (dB)
	00 25	00aa aaaa	Layer EQ Mid Freq	(0 - 58)
				20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz,

			35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
	00 26	0000 0aaa	Layer EQ Mid Q (0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
#	00 27	0000 aaaa	
	00 28	0000 bbbb	Layer EQ Mid Gain (-24 - 24) -24 - +24 (dB)
	00 29	000a aaaa	Layer EQ High Freq (0 - 24) 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
#	00 2A	0000 aaaa	
	00 2B	0000 bbbb	Layer EQ High Gain (-24 - 24) -24 - +24 (dB)
	00 2C	0aaa aaaa	Velocity Lower (1 - 127) 1 - 127
	00 2D	0aaa aaaa	Velocity Upper (1 - 127) 1 - 127
	00 2E	0aaa aaaa	Velocity Fade In Sens (0 - 127) 0 - 127
	00 2F	0aaa aaaa	Velocity Fade Out Sens (0 - 127) 0 - 127
#	00 30	0000 00aa	(reserved)
	00 31	0000 aaaa	
	00 32	0000 bbbb	
#	00 33	0000 cccc	
	00 34	0000 dddd	V-EDIT Parameter 1 (-20000 - 20000)
#	00 35	0000 aaaa	
	00 36	0000 bbbb	
	00 37	0000 cccc	
#	00 38	0000 dddd	V-EDIT Parameter 2 (-20000 - 20000)
	00 39	0000 aaaa	
	00 3A	0000 bbbb	
	00 3B	0000 cccc	
#	00 3C	0000 dddd	V-EDIT Parameter 3 (-20000 - 20000)
	00 3D	0000 aaaa	
	00 3E	0000 bbbb	
	00 3F	0000 cccc	
#	00 40	0000 dddd	V-EDIT Parameter 4 (-20000 - 20000)
	00 41	0000 aaaa	
	00 42	0000 bbbb	
	00 43	0000 cccc	
#	00 44	0000 dddd	V-EDIT Parameter 5 (-20000 - 20000)
	00 45	0000 aaaa	
	00 46	0000 bbbb	
	00 47	0000 cccc	
#	00 48	0000 dddd	V-EDIT Parameter 6 (-20000 - 20000)
	00 49	0000 aaaa	
	00 4A	0000 bbbb	
	00 4B	0000 cccc	
#	00 4C	0000 dddd	V-EDIT Parameter 7 (-20000 - 20000)
	00 4D	0000 aaaa	
	00 4E	0000 bbbb	
	00 4F	0000 cccc	
#	00 50	0000 dddd	V-EDIT Parameter 8 (-20000 - 20000)
	00 51	0000 aaaa	
	00 52	0000 bbbb	
	00 53	0000 cccc	
#	00 54	0000 dddd	V-EDIT Parameter 9 (-20000 - 20000)
	00 55	0000 aaaa	
	00 56	0000 bbbb	
	00 57	0000 cccc	
#	00 58	0000 dddd	V-EDIT Parameter 10 (-20000 - 20000)
	00 59	0000 aaaa	
	00 5A	0000 bbbb	
	00 5B	0000 cccc	
#	00 5C	0000 dddd	V-EDIT Parameter 11 (-20000 - 20000)
	00 5D	0000 aaaa	
	00 5E	0000 bbbb	
	00 5F	0000 cccc	
#	00 60	0000 dddd	V-EDIT Parameter 12 (-20000 - 20000)
	00 61	0000 aaaa	
	00 62	0000 bbbb	
	00 63	0000 cccc	
#	00 64	0000 dddd	V-EDIT Parameter 13 (-20000 - 20000)
	00 65	0000 aaaa	
	00 66	0000 bbbb	
	00 67	0000 cccc	
#	00 68	0000 dddd	V-EDIT Parameter 14 (-20000 - 20000)
	00 69	0000 aaaa	
	00 6A	0000 bbbb	
	00 6B	0000 cccc	
#	00 6C	0000 dddd	V-EDIT Parameter 15 (-20000 - 20000)
	00 6D	0000 aaaa	
	00 6E	0000 bbbb	
	00 6F	0000 cccc	
#	00 70	0000 dddd	V-EDIT Parameter 16 (-20000 - 20000)
	00 71	0000 aaaa	
	00 72	0000 bbbb	
	00 73	0000 cccc	
#	00 74	0000 dddd	V-EDIT Parameter 17 (-20000 - 20000)
	00 75	0000 aaaa	
	00 76	0000 bbbb	
	00 77	0000 cccc	
#	00 78	0000 dddd	V-EDIT Parameter 18 (-20000 - 20000)
	00 79	0000 aaaa	

	00 7A	0000 bbbb		
	00 7B	0000 cccc		
#	00 7C	0000 dddd	V-EDIT Parameter 19	(-20000 - 20000)
	00 7D	0000 aaaa		
	00 7E	0000 bbbb		
	00 7F	0000 cccc		
#	01 00	0000 dddd	V-EDIT Parameter 20	(-20000 - 20000)
	01 01	0000 aaaa		
	01 02	0000 bbbb		
	01 03	0000 cccc		
#	01 04	0000 dddd	V-EDIT Parameter 21	(-20000 - 20000)
	01 05	0000 aaaa		
	01 06	0000 bbbb		
	01 07	0000 cccc		
#	01 08	0000 dddd	V-EDIT Parameter 22	(-20000 - 20000)
	01 09	0000 aaaa		
	01 0A	0000 bbbb		
	01 0B	0000 cccc		
#	01 0C	0000 dddd	V-EDIT Parameter 23	(-20000 - 20000)
	01 0D	0000 aaaa		
	01 0E	0000 bbbb		
	01 0F	0000 cccc		
#	01 10	0000 dddd	V-EDIT Parameter 24	(-20000 - 20000)
	01 11	0000 aaaa		
	01 12	0000 bbbb		
	01 13	0000 cccc		
#	01 14	0000 dddd	V-EDIT Parameter 25	(-20000 - 20000)
	01 15	0000 aaaa		
	01 16	0000 bbbb		
	01 17	0000 cccc		
#	01 18	0000 dddd	V-EDIT Parameter 26	(-20000 - 20000)
	01 19	0000 aaaa		
	01 1A	0000 bbbb		
	01 1B	0000 cccc		
#	01 1C	0000 dddd	V-EDIT Parameter 27	(-20000 - 20000)
	01 1D	0000 aaaa		
	01 1E	0000 bbbb		
	01 1F	0000 cccc		
#	01 20	0000 dddd	V-EDIT Parameter 28	(-20000 - 20000)
	01 21	0000 aaaa		
	01 22	0000 bbbb		
	01 23	0000 cccc		
#	01 24	0000 dddd	V-EDIT Parameter 29	(-20000 - 20000)
	01 25	0000 aaaa		
	01 26	0000 bbbb		
	01 27	0000 cccc		
#	01 28	0000 dddd	V-EDIT Parameter 30	(-20000 - 20000)
	01 29	0000 aaaa		
	01 2A	0000 bbbb		
	01 2B	0000 cccc		
#	01 2C	0000 dddd	V-EDIT Parameter 31	(-20000 - 20000)
	01 2D	0000 aaaa		
	01 2E	0000 bbbb		
	01 2F	0000 cccc		
#	01 30	0000 dddd	V-EDIT Parameter 32	(-20000 - 20000)
	01 31	0000 aaaa		
	01 32	0000 bbbb		
	01 33	0000 cccc		
#	01 34	0000 dddd	V-EDIT Parameter 33	(-20000 - 20000)
	01 35	0000 aaaa		
	01 36	0000 bbbb		
	01 37	0000 cccc		
#	01 38	0000 dddd	V-EDIT Parameter 34	(-20000 - 20000)
	01 39	0000 aaaa		
	01 3A	0000 bbbb		
	01 3B	0000 cccc		
#	01 3C	0000 dddd	V-EDIT Parameter 35	(-20000 - 20000)
	01 3D	0000 aaaa		
	01 3E	0000 bbbb		
	01 3F	0000 cccc		
#	01 40	0000 dddd	V-EDIT Parameter 36	(-20000 - 20000)
	01 41	0000 aaaa		
	01 42	0000 bbbb		
	01 43	0000 cccc		
#	01 44	0000 dddd	V-EDIT Parameter 37	(-20000 - 20000)
	01 45	0000 aaaa		
	01 46	0000 bbbb		
	01 47	0000 cccc		
#	01 48	0000 dddd	V-EDIT Parameter 38	(-20000 - 20000)
	01 49	0000 aaaa		
	01 4A	0000 bbbb		
	01 4B	0000 cccc		
#	01 4C	0000 dddd	V-EDIT Parameter 39	(-20000 - 20000)
	01 4D	0000 aaaa		
	01 4E	0000 bbbb		
	01 4F	0000 cccc		
	01 50	0000 dddd	V-EDIT Parameter 40	(-20000 - 20000)
00 00 01 51 Total Size				

* [KitPad]

Offset	Address	Description		
#	00 00	0000 aaaa	Pan	(L30 - 1, CTR, R1 - 30)
	00 01	0000 bbbb		
	00 02	0000 000a		
			Bus Send Head/Rim	(0 - 1)
#	00 03	0000 aaaa	Bus Send Level	(-601 - 60)
	00 04	0000 bbbb		
	00 05	0000 cccc		
	00 06	0000 dddd	Output Routing	-INF, -60.0 - +6.0 [dB]
	00 07	0000 aaaa		
				(0 - 8)

			DRUM, DRUM + SEND BUS A, INSERT TO BUS A, DRUM + SEND BUS B, INSERT TO BUS B, DRUM + SEND BUS C, INSERT TO BUS C, DRUM + SEND BUS D, INSERT TO BUS D
	00 08	0000 aaaa	Pad Side Chain Control (0 - 8) OFF, BUS-A FX1, BUS-A FX2 BUS-B FX1, BUS-B FX2, BUS-C FX1, BUS-C FX2, BUS-D FX1, BUS-D FX2
#	00 09	0000 aaaa	
	00 0A	0000 bbbb	
	00 0B	0000 cccc	
	00 0C	0000 dddd	Side Chain Control Send Level (-601 - 120) -INF, -60.0 - +12.0 [dB]
	00 0D	0000 000a	Pad Comp Switch (0 - 1) OFF, ON
	00 0E	0000 000a	Pad Comp Type (0 - 1) STANDARD, FETCOMP-76
#	00 0F	0000 aaaa	
	00 10	0000 bbbb	Template (Type: STANDARD) (0 - 10) KICK 1, KICK 2, SNARE 1, SNARE 2, TOM 1, TOM 2, CYMBAL 1, CYMBAL 2, SOFT COMP, HARD COMP, LIMITER
#	00 11	0000 aaaa	
	00 12	0000 bbbb	Template (Type: FETCOMP-76) (0 - 22) KICK PRESENCE, KICK SOFT, KICK MID, KICK HEAVY, SNARE PRESENCE, SNARE SOFT, SNARE MID, SNARE HEAVY, TOM PRESENCE, TOM SOFT, TOM MID, TOM HEAVY, FLOOR TOM SOFT, FLOOR TOM MID, FLOOR TOM HEAVY, HI-HAT PRESENCE, HI-HAT SOFT, HI-HAT MID, HI-HAT HEAVY, CYMBAL PRESENCE, CYMBAL SOFT, CYMBAL MID, CYMBAL HEAVY
#	00 13	0000 aaaa	
	00 14	0000 bbbb	
	00 15	0000 cccc	
	00 16	0000 dddd	Pad Comp Output Volume (-601 - 60) -INF, -60.0 - +6.0 [dB]
#	00 17	0000 aaaa	
	00 18	0000 bbbb	
	00 19	0000 cccc	
	00 1A	0000 dddd	Pad Comp Parameter 1 (-20000 - 20000)
#	00 1B	0000 aaaa	
	00 1C	0000 bbbb	
	00 1D	0000 cccc	
	00 1E	0000 dddd	Pad Comp Parameter 2 (-20000 - 20000)
#	00 1F	0000 aaaa	
	00 20	0000 bbbb	
	00 21	0000 cccc	
	00 22	0000 dddd	Pad Comp Parameter 3 (-20000 - 20000)
#	00 23	0000 aaaa	
	00 24	0000 bbbb	
	00 25	0000 cccc	
	00 26	0000 dddd	Pad Comp Parameter 4 (-20000 - 20000)
#	00 27	0000 aaaa	
	00 28	0000 bbbb	
	00 29	0000 cccc	
	00 2A	0000 dddd	Pad Comp Parameter 5 (-20000 - 20000)
#	00 2B	0000 aaaa	
	00 2C	0000 bbbb	
	00 2D	0000 cccc	
	00 2E	0000 dddd	Pad Comp Parameter 6 (-20000 - 20000)
#	00 2F	0000 aaaa	
	00 30	0000 bbbb	
	00 31	0000 cccc	
	00 32	0000 dddd	Pad Comp Parameter 7 (-20000 - 20000)
#	00 33	0000 aaaa	
	00 34	0000 bbbb	
	00 35	0000 cccc	
	00 36	0000 dddd	Pad Comp Parameter 8 (-20000 - 20000)
#	00 37	0000 aaaa	
	00 38	0000 bbbb	
	00 39	0000 cccc	
	00 3A	0000 dddd	Pad Comp Parameter 9 (-20000 - 20000)
#	00 3B	0000 aaaa	
	00 3C	0000 bbbb	
	00 3D	0000 cccc	
	00 3E	0000 dddd	Pad Comp Parameter 10 (-20000 - 20000)
#	00 3F	0000 aaaa	
	00 40	0000 bbbb	
	00 41	0000 cccc	
	00 42	0000 dddd	Pad Comp Parameter 11 (-20000 - 20000)
#	00 43	0000 aaaa	
	00 44	0000 bbbb	
	00 45	0000 cccc	
	00 46	0000 dddd	Pad Comp Parameter 12 (-20000 - 20000)
	00 00 00 47	Total Size	

* [KitBusSetup]

Offset	Address	Description
#	00 00	0000 aaaa
	00 01	0000 bbbb
	00 02	0000 cccc
	00 03	0000 dddd
	00 04	0000 000a
	00 05	0000 000a
	00 06	0000 000a
#	00 07	0000 aaaa

	00 08	0000 bbbb	FX1 Side Chain Pre-Gate Threshold	(-60 - 0) -60 - 0[dB]
	00 09	0000 000a	FX1 Side Chain Pre-Gate Mode	(0 - 1) GATE, DUCK
	00 0A	0aaa aaaa	FX1 Side Chain Pre-Gate Attack	(0 - 100) 0 - 100[ms]
	00 0B	0aaa aaaa	FX1 Side Chain Pre-Gate Hold	(0 - 99) 10 - 1000[ms]
	00 0C	0aaa aaaa	FX1 Side Chain Pre-Gate Release	(0 - 99) 10 - 1000[ms]
	00 0D	0aaa aaaa	FX1 Side Chain Pre-Gate Balance	(0 - 100) D100:0W - D0:100W
	00 0E	0aaa aaaa	FX1 Side Chain Pre-Gate Level	(0 - 127) 0 - 127
#	00 0F	0000 aaaa		
	00 10	0000 bbbb	FX1 Side Chain Pre-Gate Output Gain	(-48 - 48) -24.0 - +24.0[dB]
	00 11	0000 000a	FX2 Side Chain Pre-Gate Switch	(0 - 1) OFF, ON
#	00 12	0000 aaaa		
	00 13	0000 bbbb	FX2 Side Chain Pre-Gate Threshold	(-60 - 0) -60 - 0[dB]
	00 14	0000 000a	FX2 Side Chain Pre-Gate Mode	(0 - 1) GATE, DUCK
	00 15	0aaa aaaa	FX2 Side Chain Pre-Gate Attack	(0 - 100) 0 - 100[ms]
	00 16	0aaa aaaa	FX2 Side Chain Pre-Gate Hold	(0 - 99) 10 - 1000[ms]
	00 17	0aaa aaaa	FX2 Side Chain Pre-Gate Release	(0 - 99) 10 - 1000[ms]
	00 18	0aaa aaaa	FX2 Side Chain Pre-Gate Balance	(0 - 100) D100:0W - D0:100W
	00 19	0aaa aaaa	FX2 Side Chain Pre-Gate Level	(0 - 127) 0 - 127
#	00 1A	0000 aaaa		
	00 1B	0000 bbbb	FX2 Side Chain Pre-Gate Output Gain	(-48 - 48) -24.0 - +24.0[dB]
00 00 00 1C			Total Size	

* [KitRoom]

Offset	Address	Description
	00 00	0000 000a Room Switch (0 - 1) OFF, ON
	00 01	0000 000a Type (0 - 1) REALISTIC, SYNTHETIC
#	00 02	0000 aaaa
	00 03	0000 bbbb
	00 04	0000 cccc
	00 05	0000 dddd Level (-601 - 120) -INF, -60.0 - +12.0 [dB]
	00 06	0000 000a Pre Transient Switch (0 - 1) OFF, ON
#	00 07	0000 aaaa
	00 08	0000 bbbb Pre Transient Attack (-50 - 0)
#	00 09	0000 aaaa
	00 0A	0000 bbbb
	00 0B	0000 cccc
	00 0C	0000 dddd Pre Transient Gain (-601 - 120) -INF, -60.0 - +12.0 [dB]
	00 0D	0000 000a Pre EQ Switch (0 - 1) OFF, ON
	00 0E	00aa aaaa Pre EQ Low Cut (0 - 35) OFF, 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz
	00 0F	0000 000a Pre EQ Low Type (0 - 1) SHELV, PEAK
	00 10	00aa aaaa Pre EQ Low Freq (0 - 34) 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz
	00 11	00aa aaaa Pre EQ Mid 1 Freq (0 - 58) 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
	00 12	00aa aaaa Pre EQ Mid 2 Freq (0 - 58) 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz,

			3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
	00 13	0000 000a	Pre EQ High Type (0 - 1) SHELV, PEAK
	00 14	000a aaaa	Pre EQ High Freq (0 - 24) 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
	00 15	0000 0aaa	Pre EQ Low Q (0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 16	0000 0aaa	Pre EQ Mid 1 Q (0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 17	0000 0aaa	Pre EQ Mid 2 Q (0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 18	0000 0aaa	Pre EQ High Q (0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
#	00 19	0000 aaaa	
	00 1A	0000 bbbb	
	00 1B	0000 cccc	
	00 1C	0000 dddd	Pre EQ Low Gain (-400 - 150) -40.0 - +15.0[dB]
#	00 1D	0000 aaaa	
	00 1E	0000 bbbb	
	00 1F	0000 cccc	
	00 20	0000 dddd	Pre EQ Mid 1 Gain (-400 - 150) -40.0 - +15.0[dB]
#	00 21	0000 aaaa	
	00 22	0000 bbbb	
	00 23	0000 cccc	
	00 24	0000 dddd	Pre EQ Mid 1 Gain (-400 - 150) -40.0 - +15.0[dB]
#	00 25	0000 aaaa	
	00 26	0000 bbbb	
	00 27	0000 cccc	
	00 28	0000 dddd	Pre EQ High Gain (-400 - 150) -40.0 - +15.0[dB]
	00 29	0000 000a	Pre Comp Switch (0 - 1) OFF, ON
#	00 2A	0000 aaaa	
	00 2B	0000 bbbb	Pre Comp Gain (-48 - 48) -24.0 - +24.0[dB]
#	00 2C	0000 aaaa	
	00 2D	0000 bbbb	Pre Comp Threshold (-60 - 0) -60 - 0[dB]
	00 2E	0000 0aaa	Pre Comp Ratio (0 - 7) 1:1, 2:1, 3:1, 4:1, 8:1, 16:1, 32:1, INF:1
	00 2F	0000 00aa	Pre Comp Knee (0 - 3) HARD, SOFT1, SOFT2, SOFT3
	00 30	0aaa aaaa	Pre Comp Attack (0 - 100) 0.1 - 100[ms]
	00 31	0aaa aaaa	Pre Comp Release (0 - 99) 10 - 1000[ms]
	00 32	0000 000a	Post Comp Switch (0 - 1) OFF, ON
#	00 33	0000 aaaa	
	00 34	0000 bbbb	Post Comp Gain (-48 - 48) -24.0 - +24.0[dB]
#	00 35	0000 aaaa	
	00 36	0000 bbbb	Post Comp Threshold (-60 - 0) -60 - 0[dB]
	00 37	0000 0aaa	Post Comp Ratio (0 - 7) 1:1, 2:1, 3:1, 4:1, 8:1, 16:1, 32:1, INF:1
	00 38	0000 00aa	Post Comp Knee (0 - 3) HARD, SOFT1, SOFT2, SOFT3
	00 39	0aaa aaaa	Post Comp Attack (0 - 100) 0.1 - 100[ms]
	00 3A	0aaa aaaa	Post Comp Release (0 - 99) 10 - 1000[ms]
	00 3B	0000 000a	Post EQ Switch (0 - 1) OFF, ON
	00 3C	0000 000a	Post EQ Mid/Side Switch (0 - 1) OFF, ON
	00 3D	0000 0aaa	Output Width (0 - 6) DEFAULT, WIDE +1 - +6
	00 3E	00aa aaaa	Post EQ Low Freq (0 - 34) 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz
	00 3F	00aa aaaa	Post EQ Mid Freq (0 - 58) 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
	00 40	000a aaaa	Post EQ High Freq (0 - 24) 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
	00 41	0000 0aaa	Post EQ Mid Q (0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
#	00 42	0000 aaaa	

	00 43	0000 bbbb		
	00 44	0000 cccc		
	00 45	0000 dddd	Post EQ Low Gain	(-400 - 150) -40.0 - +15.0[dB]
#	00 46	0000 aaaa		
	00 47	0000 bbbb		
	00 48	0000 cccc		
	00 49	0000 dddd	Post EQ Mid Gain	(-400 - 150) -40.0 - +15.0[dB]
#	00 4A	0000 aaaa		
	00 4B	0000 bbbb		
	00 4C	0000 cccc		
	00 4D	0000 dddd	Post EQ High Gain	(-400 - 150) -40.0 - +15.0[dB]
	00 4E	00aa aaaa	Post EQ Side Low Freq	(0 - 34) 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz
	00 4F	00aa aaaa	Post EQ Side Mid Freq	(0 - 58) 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
	00 50	000a aaaa	Post EQ Side High Freq	(0 - 24) 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
	00 51	0000 0aaa	Post EQ Side Mid Q	(0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
#	00 52	0000 aaaa		
	00 53	0000 bbbb		
	00 54	0000 cccc		
	00 55	0000 dddd	Post EQ Side Low Gain	(-400 - 150) -40.0 - +15.0[dB]
#	00 56	0000 aaaa		
	00 57	0000 bbbb		
	00 58	0000 cccc		
	00 59	0000 dddd	Post EQ Side Mid Gain	(-400 - 150) -40.0 - +15.0[dB]
#	00 5A	0000 aaaa		
	00 5B	0000 bbbb		
	00 5C	0000 cccc		
	00 5D	0000 dddd	Post EQ Side High Gain	(-400 - 150) -40.0 - +15.0[dB]
#	00 5E	0000 aaaa		
	00 5F	0000 bbbb		
	00 60	0000 cccc		
	00 61	0000 dddd	Room Parameter 1	(-20000 - 20000)
#	00 62	0000 aaaa		
	00 63	0000 bbbb		
	00 64	0000 cccc		
	00 65	0000 dddd	Room Parameter 2	(-20000 - 20000)
#	00 66	0000 aaaa		
	00 67	0000 bbbb		
	00 68	0000 cccc		
	00 69	0000 dddd	Room Parameter 3	(-20000 - 20000)
#	00 6A	0000 aaaa		
	00 6B	0000 bbbb		
	00 6C	0000 cccc		
	00 6D	0000 dddd	Room Parameter 4	(-20000 - 20000)
#	00 6E	0000 aaaa		
	00 6F	0000 bbbb		
	00 70	0000 cccc		
	00 71	0000 dddd	Room Parameter 5	(-20000 - 20000)
#	00 72	0000 aaaa		
	00 73	0000 bbbb		
	00 74	0000 cccc		
	00 75	0000 dddd	Room Parameter 6	(-20000 - 20000)
#	00 76	0000 aaaa		
	00 77	0000 bbbb		
	00 78	0000 cccc		
	00 79	0000 dddd	Room Parameter 7	(-20000 - 20000)
#	00 7A	0000 aaaa		
	00 7B	0000 bbbb		
	00 7C	0000 cccc		
	00 7D	0000 dddd	Room Parameter 8	(-20000 - 20000)
#	00 7E	0000 aaaa		
	00 7F	0000 bbbb		
	01 00	0000 cccc		
	01 01	0000 dddd	Room Parameter 9	(-20000 - 20000)
#	01 02	0000 aaaa		
	01 03	0000 bbbb		
	01 04	0000 cccc		
	01 05	0000 dddd	Room Parameter 10	(-20000 - 20000)
#	01 06	0000 aaaa		
	01 07	0000 bbbb		
	01 08	0000 cccc		
	01 09	0000 dddd	Room Parameter 11	(-20000 - 20000)
#	01 0A	0000 aaaa		
	01 0B	0000 bbbb		
	01 0C	0000 cccc		
	01 0D	0000 dddd	Room Parameter 12	(-20000 - 20000)
#	01 0E	0000 aaaa		

	01 0F	0000 bbbb		
	01 10	0000 cccc		
#	01 11	0000 dddd	Room Parameter 13	(-20000 - 20000)
	01 12	0000 aaaa		
	01 13	0000 bbbb		
	01 14	0000 cccc		
#	01 15	0000 dddd	Room Parameter 14	(-20000 - 20000)
	01 16	0000 aaaa		
	01 17	0000 bbbb		
	01 18	0000 cccc		
#	01 19	0000 dddd	Room Parameter 15	(-20000 - 20000)
	01 1A	0000 aaaa		
	01 1B	0000 bbbb		
	01 1C	0000 cccc		
#	01 1D	0000 dddd	Room Parameter 16	(-20000 - 20000)
	01 1E	0000 aaaa		
	01 1F	0000 bbbb		
	01 20	0000 cccc		
#	01 21	0000 dddd	Room Parameter 17	(-20000 - 20000)
	01 22	0000 aaaa		
	01 23	0000 bbbb		
	01 24	0000 cccc		
#	01 25	0000 dddd	Room Parameter 18	(-20000 - 20000)
	01 26	0000 aaaa		
	01 27	0000 bbbb		
	01 28	0000 cccc		
#	01 29	0000 dddd	Room Parameter 19	(-20000 - 20000)
	01 2A	0000 aaaa		
	01 2B	0000 bbbb		
	01 2C	0000 cccc		
	01 2D	0000 dddd	Room Parameter 20	(-20000 - 20000)
00 00 01 2E		Total Size		

* [KitOverhead]

Offset	Address	Description		
	00 00	0000 000a	Overhead Switch	(0 - 1) OFF, ON
	00 01	0000 0aaa	Output Width	(0 - 6) DEFAULT, WIDE +1 - +6
	00 02	0000 0aaa	Distance	(0 - 6) 0 - 6
#	00 03	0000 aaaa		
	00 04	0000 bbbb	Time	(-64 - 0) -64 - 0
	00 05	0000 0aaa	Mic Type	(0 - 7) NATURAL, SOLID, CHIC, WARM, CLEAR, DRY, NARROW, PUNCHY
#	00 06	0000 aaaa		
	00 07	0000 bbbb		
	00 08	0000 cccc		
	00 09	0000 dddd	Level	(-601 - 120) -INF, -60.0 - +12.0 [dB]
	00 0A	0000 000a	Pre Transient Switch	(0 - 1) OFF, ON
#	00 0B	0000 aaaa		
	00 0C	0000 bbbb	Pre Transient Attack	(-50 - 0) -50 - 0
#	00 0D	0000 aaaa		
	00 0E	0000 bbbb		
	00 0F	0000 cccc		
	00 10	0000 dddd	Pre Transient Gain	(-601 - 120) -INF, -60.0 - +12.0 [dB]
	00 11	0000 000a	Pre Comp Switch	(0 - 1) OFF, ON
#	00 12	0000 aaaa		
	00 13	0000 bbbb	Pre Comp Gain	(-48 - 48) -24.0 - +24.0 [dB]
#	00 14	0000 aaaa		
	00 15	0000 bbbb	Pre Comp Threshold	(-60 - 0) -60 - 0 [dB]
	00 16	0000 0aaa	Pre Comp Ratio	(0 - 7) 1:1, 2:1, 3:1, 4:1, 8:1, 16:1, 32:1, INF:1
	00 17	0000 00aa	Pre Comp Knee	(0 - 3) HARD, SOFT1, SOFT2, SOFT3
	00 18	0aaa aaaa	Pre Comp Attack	(0 - 100) 0.1 - 100 [ms]
	00 19	0aaa aaaa	Pre Comp Release	(0 - 99) 10 - 1000 [ms]
	00 1A	0000 000a	Post Comp Switch	(0 - 1) OFF, ON
#	00 1B	0000 aaaa		
	00 1C	0000 bbbb	Post Comp Gain	(-48 - 48) -24.0 - +24.0 [dB]
#	00 1D	0000 aaaa		
	00 1E	0000 bbbb	Post Comp Threshold	(-60 - 0) -60 - 0 [dB]
	00 1F	0000 0aaa	Post Comp Ratio	(0 - 7) 1:1, 2:1, 3:1, 4:1, 8:1, 16:1, 32:1, INF:1
	00 20	0000 00aa	Post Comp Knee	(0 - 3) HARD, SOFT1, SOFT2, SOFT3
	00 21	0aaa aaaa	Post Comp Attack	(0 - 100) 0.1 - 100 [ms]
	00 22	0aaa aaaa	Post Comp Release	(0 - 99) 10 - 1000 [ms]
	00 23	0000 000a	Post EQ Switch	(0 - 1) OFF, ON
	00 24	0000 000a	Post EQ Mid/Side Switch	(0 - 1) OFF, ON
	00 25	00aa aaaa	Post EQ Low Freq	(0 - 34) 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz,

			112. 5Hz, 125Hz, 142. 5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282. 5Hz, 315Hz, 357. 5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz
	00 26	00aa aaaa	Post EQ Mid Freq (0 - 58) 20Hz, 22. 5Hz, 25Hz, 28. 25Hz, 31. 5Hz, 35. 75Hz, 40Hz, 45Hz, 50Hz, 56. 5Hz, 63Hz, 71. 5Hz, 80Hz, 90Hz, 100Hz, 112. 5Hz, 125Hz, 142. 5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282. 5Hz, 315Hz, 357. 5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1. 125kHz, 1. 25kHz, 1. 425kHz, 1. 6kHz, 1. 8kHz, 2kHz, 2. 25kHz, 2. 5kHz, 2. 825kHz, 3. 15kHz, 3. 575kHz, 4kHz, 4. 5kHz, 5kHz, 5. 65kHz, 6. 3kHz, 7. 15kHz, 8kHz, 9kHz, 10kHz, 11. 25kHz, 12. 5kHz, 14. 25kHz, 16kHz
	00 27	000a aaaa	Post EQ High Freq (0 - 24) 1kHz, 1. 125kHz, 1. 25kHz, 1. 425kHz, 1. 6kHz, 1. 8kHz, 2kHz, 2. 25kHz, 2. 5kHz, 2. 825kHz, 3. 15kHz, 3. 575kHz, 4kHz, 4. 5kHz, 5kHz, 5. 65kHz, 6. 3kHz, 7. 15kHz, 8kHz, 9kHz, 10kHz, 11. 25kHz, 12. 5kHz, 14. 25kHz, 16kHz
	00 28	0000 0aaa	Post EQ Mid Q (0 - 6) 0. 5, 1. 0, 2. 0, 3. 0, 4. 0, 8. 0, 16. 0
#	00 29	0000 aaaa	
	00 2A	0000 bbbb	
	00 2B	0000 cccc	
	00 2C	0000 dddd	Post EQ Low Gain (-400 - 150) -40. 0 - +15. 0[dB]
#	00 2D	0000 aaaa	
	00 2E	0000 bbbb	
	00 2F	0000 cccc	
	00 30	0000 dddd	Post EQ Mid Gain (-400 - 150) -40. 0 - +15. 0[dB]
#	00 31	0000 aaaa	
	00 32	0000 bbbb	
	00 33	0000 cccc	
	00 34	0000 dddd	Post EQ High Gain (-400 - 150) -40. 0 - +15. 0[dB]
	00 35	00aa aaaa	Post EQ Side Low Freq (0 - 34) 20Hz, 22. 5Hz, 25Hz, 28. 25Hz, 31. 5Hz, 35. 75Hz, 40Hz, 45Hz, 50Hz, 56. 5Hz, 63Hz, 71. 5Hz, 80Hz, 90Hz, 100Hz, 112. 5Hz, 125Hz, 142. 5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282. 5Hz, 315Hz, 357. 5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz
	00 36	00aa aaaa	Post EQ Side Mid Freq (0 - 58) 20Hz, 22. 5Hz, 25Hz, 28. 25Hz, 31. 5Hz, 35. 75Hz, 40Hz, 45Hz, 50Hz, 56. 5Hz, 63Hz, 71. 5Hz, 80Hz, 90Hz, 100Hz, 112. 5Hz, 125Hz, 142. 5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282. 5Hz, 315Hz, 357. 5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1. 125kHz, 1. 25kHz, 1. 425kHz, 1. 6kHz, 1. 8kHz, 2kHz, 2. 25kHz, 2. 5kHz, 2. 825kHz, 3. 15kHz, 3. 575kHz, 4kHz, 4. 5kHz, 5kHz, 5. 65kHz, 6. 3kHz, 7. 15kHz, 8kHz, 9kHz, 10kHz, 11. 25kHz, 12. 5kHz, 14. 25kHz, 16kHz
	00 37	000a aaaa	Post EQ Side High Freq (0 - 24) 1kHz, 1. 125kHz, 1. 25kHz, 1. 425kHz, 1. 6kHz, 1. 8kHz, 2kHz, 2. 25kHz, 2. 5kHz, 2. 825kHz, 3. 15kHz, 3. 575kHz, 4kHz, 4. 5kHz, 5kHz, 5. 65kHz, 6. 3kHz, 7. 15kHz, 8kHz, 9kHz, 10kHz, 11. 25kHz, 12. 5kHz, 14. 25kHz, 16kHz
	00 38	0000 0aaa	Post EQ Side Mid Q (0 - 6) 0. 5, 1. 0, 2. 0, 3. 0, 4. 0, 8. 0, 16. 0
#	00 39	0000 aaaa	
	00 3A	0000 bbbb	
	00 3B	0000 cccc	
	00 3C	0000 dddd	Post EQ Side Low Gain (-400 - 150) -40. 0 - +15. 0[dB]
#	00 3D	0000 aaaa	
	00 3E	0000 bbbb	
	00 3F	0000 cccc	
	00 40	0000 dddd	Post EQ Side Mid Gain (-400 - 150) -40. 0 - +15. 0[dB]
#	00 41	0000 aaaa	
	00 42	0000 bbbb	
	00 43	0000 cccc	
	00 44	0000 dddd	Post EQ Side High Gain (-400 - 150) -40. 0 - +15. 0[dB]
	00 45	0000 00aa	Filter 1-A Type (0 - 3) THRU, HICUT, LOCUT, PKG
	00 46	0000 00aa	Filter 2-A Type (0 - 3) THRU, HICUT, LOCUT, PKG
	00 47	0000 00aa	Filter 3-A Type (0 - 3) THRU, HICUT, LOCUT, PKG
	00 48	0000 00aa	Filter 4-A Type (0 - 3) THRU, HICUT, LOCUT, PKG
	00 49	0000 00aa	Filter 5-A Type (0 - 3) THRU, HICUT, LOCUT, PKG
	00 4A	0000 00aa	Filter 6-A Type (0 - 3) THRU, HICUT, LOCUT, PKG
	00 4B	00aa aaaa	Filter 1-A Freq (0 - 58) 20, 22. 5, 25, 28. 25, 31. 5, 35. 75, 40, 45, 50, 56. 5, 63, 71. 5, 80, 90, 100, 112. 5, 125, 142. 5, 160, 180, 200, 225, 250, 282. 5, 315, 357. 5, 400, 450, 500, 565, 630, 715, 800, 900, 1k, 1. 125k, 1. 25k, 1. 425k, 1. 6k, 1. 8k, 2k, 2. 25k, 2. 5k, 2. 825k, 3. 15k, 3. 575k, 4k, 4. 5k, 5k, 5. 65k, 6. 3k, 7. 15k, 8k, 9k, 10k, 11. 25k, 12. 5k, 14. 25k, 16k

	00 4C	00aa aaaa	Filter 2-A Freq	(0 - 58) 20, 22.5, 25, 28.25, 31.5, 35.75, 40, 45, 50, 56.5, 63, 71.5, 80, 90, 100, 112.5, 125, 142.5, 160, 180, 200, 225, 250, 282.5, 315, 357.5, 400, 450, 500, 565, 630, 715, 800, 900, 1k, 1.125k, 1.25k, 1.425k, 1.6k, 1.8k, 2k, 2.25k, 2.5k, 2.825k, 3.15k, 3.575k, 4k, 4.5k, 5k, 5.65k, 6.3k, 7.15k, 8k, 9k, 10k, 11.25k, 12.5k, 14.25k, 16k
	00 4D	00aa aaaa	Filter 3-A Freq	(0 - 58) 20, 22.5, 25, 28.25, 31.5, 35.75, 40, 45, 50, 56.5, 63, 71.5, 80, 90, 100, 112.5, 125, 142.5, 160, 180, 200, 225, 250, 282.5, 315, 357.5, 400, 450, 500, 565, 630, 715, 800, 900, 1k, 1.125k, 1.25k, 1.425k, 1.6k, 1.8k, 2k, 2.25k, 2.5k, 2.825k, 3.15k, 3.575k, 4k, 4.5k, 5k, 5.65k, 6.3k, 7.15k, 8k, 9k, 10k, 11.25k, 12.5k, 14.25k, 16k
	00 4E	00aa aaaa	Filter 4-A Freq	(0 - 58) 20, 22.5, 25, 28.25, 31.5, 35.75, 40, 45, 50, 56.5, 63, 71.5, 80, 90, 100, 112.5, 125, 142.5, 160, 180, 200, 225, 250, 282.5, 315, 357.5, 400, 450, 500, 565, 630, 715, 800, 900, 1k, 1.125k, 1.25k, 1.425k, 1.6k, 1.8k, 2k, 2.25k, 2.5k, 2.825k, 3.15k, 3.575k, 4k, 4.5k, 5k, 5.65k, 6.3k, 7.15k, 8k, 9k, 10k, 11.25k, 12.5k, 14.25k, 16k
	00 4F	00aa aaaa	Filter 5-A Freq	(0 - 58) 20, 22.5, 25, 28.25, 31.5, 35.75, 40, 45, 50, 56.5, 63, 71.5, 80, 90, 100, 112.5, 125, 142.5, 160, 180, 200, 225, 250, 282.5, 315, 357.5, 400, 450, 500, 565, 630, 715, 800, 900, 1k, 1.125k, 1.25k, 1.425k, 1.6k, 1.8k, 2k, 2.25k, 2.5k, 2.825k, 3.15k, 3.575k, 4k, 4.5k, 5k, 5.65k, 6.3k, 7.15k, 8k, 9k, 10k, 11.25k, 12.5k, 14.25k, 16k
	00 50	00aa aaaa	Filter 6-A Freq	(0 - 58) 20, 22.5, 25, 28.25, 31.5, 35.75, 40, 45, 50, 56.5, 63, 71.5, 80, 90, 100, 112.5, 125, 142.5, 160, 180, 200, 225, 250, 282.5, 315, 357.5, 400, 450, 500, 565, 630, 715, 800, 900, 1k, 1.125k, 1.25k, 1.425k, 1.6k, 1.8k, 2k, 2.25k, 2.5k, 2.825k, 3.15k, 3.575k, 4k, 4.5k, 5k, 5.65k, 6.3k, 7.15k, 8k, 9k, 10k, 11.25k, 12.5k, 14.25k, 16k
#	00 51	0000 aaaa		
	00 52	0000 bbbb		
	00 53	0000 cccc		
	00 54	0000 dddd	Filter 1-A Gain	(-400 - 150) -40.0 - +15.0[dB]
#	00 55	0000 aaaa		
	00 56	0000 bbbb		
	00 57	0000 cccc		
	00 58	0000 dddd	Filter 2-A Gain	(-400 - 150) -40.0 - +15.0[dB]
#	00 59	0000 aaaa		
	00 5A	0000 bbbb		
	00 5B	0000 cccc		
	00 5C	0000 dddd	Filter 3-A Gain	(-400 - 150) -40.0 - +15.0[dB]
#	00 5D	0000 aaaa		
	00 5E	0000 bbbb		
	00 5F	0000 cccc		
	00 60	0000 dddd	Filter 4-A Gain	(-400 - 150) -40.0 - +15.0[dB]
#	00 61	0000 aaaa		
	00 62	0000 bbbb		
	00 63	0000 cccc		
	00 64	0000 dddd	Filter 5-A Gain	(-400 - 150) -40.0 - +15.0[dB]
#	00 65	0000 aaaa		
	00 66	0000 bbbb		
	00 67	0000 cccc		
	00 68	0000 dddd	Filter 6-A Gain	(-400 - 150) -40.0 - +15.0[dB]
	00 69	0000 0aaa	Filter 1-A Q	(0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 6A	0000 0aaa	Filter 2-A Q	(0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 6B	0000 0aaa	Filter 3-A Q	(0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 6C	0000 0aaa	Filter 4-A Q	(0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 6D	0000 0aaa	Filter 5-A Q	(0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 6E	0000 0aaa	Filter 6-A Q	(0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 6F	0000 0aaa	Filter 1-B Type	(0 - 4) THRU, LPF, HPF, LSF, HSF
	00 70	0000 0aaa	Filter 2-B Type	(0 - 4) THRU, LPF, HPF, LSF, HSF
	00 71	0000 0aaa	Filter 3-B Type	(0 - 4) THRU, LPF, HPF, LSF, HSF
	00 72	0000 0aaa	Filter 4-B Type	(0 - 4) THRU, LPF, HPF, LSF, HSF
	00 73	0000 0aaa	Filter 5-B Type	(0 - 4) THRU, LPF, HPF, LSF, HSF

	00 74	0000 0aaa	Filter 6-B Type	(0 - 4) THRU, LPF, HPF, LSF, HSF
	00 75	00aa aaaa	Filter 1-B Freq	(0 - 58) 20, 22.5, 25, 28.25, 31.5, 35.75, 40, 45, 50, 56.5, 63, 71.5, 80, 90, 100, 112.5, 125, 142.5, 160, 180, 200, 225, 250, 282.5, 315, 357.5, 400, 450, 500, 565, 630, 715, 800, 900, 1k, 1.125k, 1.25k, 1.425k, 1.6k, 1.8k, 2k, 2.25k, 2.5k, 2.825k, 3.15k, 3.575k, 4k, 4.5k, 5k, 5.65k, 6.3k, 7.15k, 8k, 9k, 10k, 11.25k, 12.5k, 14.25k, 16k
	00 76	00aa aaaa	Filter 2-B Freq	(0 - 58) 20, 22.5, 25, 28.25, 31.5, 35.75, 40, 45, 50, 56.5, 63, 71.5, 80, 90, 100, 112.5, 125, 142.5, 160, 180, 200, 225, 250, 282.5, 315, 357.5, 400, 450, 500, 565, 630, 715, 800, 900, 1k, 1.125k, 1.25k, 1.425k, 1.6k, 1.8k, 2k, 2.25k, 2.5k, 2.825k, 3.15k, 3.575k, 4k, 4.5k, 5k, 5.65k, 6.3k, 7.15k, 8k, 9k, 10k, 11.25k, 12.5k, 14.25k, 16k
	00 77	00aa aaaa	Filter 3-B Freq	(0 - 58) 20, 22.5, 25, 28.25, 31.5, 35.75, 40, 45, 50, 56.5, 63, 71.5, 80, 90, 100, 112.5, 125, 142.5, 160, 180, 200, 225, 250, 282.5, 315, 357.5, 400, 450, 500, 565, 630, 715, 800, 900, 1k, 1.125k, 1.25k, 1.425k, 1.6k, 1.8k, 2k, 2.25k, 2.5k, 2.825k, 3.15k, 3.575k, 4k, 4.5k, 5k, 5.65k, 6.3k, 7.15k, 8k, 9k, 10k, 11.25k, 12.5k, 14.25k, 16k
	00 78	00aa aaaa	Filter 4-B Freq	(0 - 58) 20, 22.5, 25, 28.25, 31.5, 35.75, 40, 45, 50, 56.5, 63, 71.5, 80, 90, 100, 112.5, 125, 142.5, 160, 180, 200, 225, 250, 282.5, 315, 357.5, 400, 450, 500, 565, 630, 715, 800, 900, 1k, 1.125k, 1.25k, 1.425k, 1.6k, 1.8k, 2k, 2.25k, 2.5k, 2.825k, 3.15k, 3.575k, 4k, 4.5k, 5k, 5.65k, 6.3k, 7.15k, 8k, 9k, 10k, 11.25k, 12.5k, 14.25k, 16k
	00 79	00aa aaaa	Filter 5-B Freq	(0 - 58) 20, 22.5, 25, 28.25, 31.5, 35.75, 40, 45, 50, 56.5, 63, 71.5, 80, 90, 100, 112.5, 125, 142.5, 160, 180, 200, 225, 250, 282.5, 315, 357.5, 400, 450, 500, 565, 630, 715, 800, 900, 1k, 1.125k, 1.25k, 1.425k, 1.6k, 1.8k, 2k, 2.25k, 2.5k, 2.825k, 3.15k, 3.575k, 4k, 4.5k, 5k, 5.65k, 6.3k, 7.15k, 8k, 9k, 10k, 11.25k, 12.5k, 14.25k, 16k
	00 7A	00aa aaaa	Filter 6-B Freq	(0 - 58) 20, 22.5, 25, 28.25, 31.5, 35.75, 40, 45, 50, 56.5, 63, 71.5, 80, 90, 100, 112.5, 125, 142.5, 160, 180, 200, 225, 250, 282.5, 315, 357.5, 400, 450, 500, 565, 630, 715, 800, 900, 1k, 1.125k, 1.25k, 1.425k, 1.6k, 1.8k, 2k, 2.25k, 2.5k, 2.825k, 3.15k, 3.575k, 4k, 4.5k, 5k, 5.65k, 6.3k, 7.15k, 8k, 9k, 10k, 11.25k, 12.5k, 14.25k, 16k
#	00 7B	0000 aaaa	Filter 1-B Gain	(-400 - 150) -40.0 - +15.0[dB]
	00 7C	0000 bbbb		
	00 7D	0000 cccc		
	00 7E	0000 dddd		
#	00 7F	0000 aaaa	Filter 2-B Gain	(-400 - 150) -40.0 - +15.0[dB]
	01 00	0000 bbbb		
	01 01	0000 cccc		
	01 02	0000 dddd		
#	01 03	0000 aaaa	Filter 3-B Gain	(-400 - 150) -40.0 - +15.0[dB]
	01 04	0000 bbbb		
	01 05	0000 cccc		
	01 06	0000 dddd		
#	01 07	0000 aaaa	Filter 4-B Gain	(-400 - 150) -40.0 - +15.0[dB]
	01 08	0000 bbbb		
	01 09	0000 cccc		
	01 0A	0000 dddd		
#	01 0B	0000 aaaa	Filter 5-B Gain	(-400 - 150) -40.0 - +15.0[dB]
	01 0C	0000 bbbb		
	01 0D	0000 cccc		
	01 0E	0000 dddd		
#	01 0F	0000 aaaa	Filter 6-B Gain	(-400 - 150) -40.0 - +15.0[dB]
	01 10	0000 bbbb		
	01 11	0000 cccc		
	01 12	0000 dddd		
	00 00 01 13	Total Size		

* [KitReverb]

Offset	Address		Description

	00 00	0000 000a	Reverb Switch	(0 - 1) OFF, ON
	00 01	0000 0aaa	ReverbType	(0 - 6) TD-50 REVERB, TD-50 ROOM, WARM HALL, SRV-2000, SRV-2000 (NLR), SIMPLE REVERB, LONG REVERB
#	00 02	0000 aaaa		
	00 03	0000 bbbb		
	00 04	0000 cccc		
	00 05	0000 dddd	Level	(-601 - 120) -INF, -60.0 - +12.0 [dB]
	00 06	0000 000a	Pre Transient Switch	(0 - 1) OFF, ON
#	00 07	0000 aaaa		
	00 08	0000 bbbb	Pre Transient Attack	(-50 - 0) -50 - 0
#	00 09	0000 aaaa		
	00 0A	0000 bbbb		
	00 0B	0000 cccc		
	00 0C	0000 dddd	Pre Transient Gain	(-601 - 120) -INF, -60.0 - +12.0 [dB]
	00 0D	0000 000a	Post Comp Switch	(0 - 1) OFF, ON
#	00 0E	0000 aaaa		
	00 0F	0000 bbbb	Post Comp Gain	(-48 - 48) -24.0 - +24.0 [dB]
#	00 10	0000 aaaa		
	00 11	0000 bbbb	Post Comp Threshold	(-60 - 0) -60 - 0 [dB]
	00 12	0000 0aaa	Post Comp Ratio	(0 - 7) 1:1, 2:1, 3:1, 4:1, 8:1, 16:1, 32:1, INF:1
	00 13	0000 00aa	Post Comp Knee	(0 - 3) HARD, SOFT1, SOFT2, SOFT3
	00 14	0aaa aaaa	Post Comp Attack	(0 - 100) 0.1 - 100 [ms]
	00 15	0aaa aaaa	Post Comp Release	(0 - 99) 10 - 1000 [ms]
#	00 16	0000 aaaa		
	00 17	0000 bbbb		
	00 18	0000 cccc		
	00 19	0000 dddd	Reverb Parameter 1	(-20000 - 20000)
#	00 1A	0000 aaaa		
	00 1B	0000 bbbb		
	00 1C	0000 cccc		
	00 1D	0000 dddd	Reverb Parameter 2	(-20000 - 20000)
#	00 1E	0000 aaaa		
	00 1F	0000 bbbb		
	00 20	0000 cccc		
	00 21	0000 dddd	Reverb Parameter 3	(-20000 - 20000)
#	00 22	0000 aaaa		
	00 23	0000 bbbb		
	00 24	0000 cccc		
	00 25	0000 dddd	Reverb Parameter 4	(-20000 - 20000)
#	00 26	0000 aaaa		
	00 27	0000 bbbb		
	00 28	0000 cccc		
	00 29	0000 dddd	Reverb Parameter 5	(-20000 - 20000)
#	00 2A	0000 aaaa		
	00 2B	0000 bbbb		
	00 2C	0000 cccc		
	00 2D	0000 dddd	Reverb Parameter 6	(-20000 - 20000)
#	00 2E	0000 aaaa		
	00 2F	0000 bbbb		
	00 30	0000 cccc		
	00 31	0000 dddd	Reverb Parameter 7	(-20000 - 20000)
#	00 32	0000 aaaa		
	00 33	0000 bbbb		
	00 34	0000 cccc		
	00 35	0000 dddd	Reverb Parameter 8	(-20000 - 20000)
#	00 36	0000 aaaa		
	00 37	0000 bbbb		
	00 38	0000 cccc		
	00 39	0000 dddd	Reverb Parameter 9	(-20000 - 20000)
#	00 3A	0000 aaaa		
	00 3B	0000 bbbb		
	00 3C	0000 cccc		
	00 3D	0000 dddd	Reverb Parameter 10	(-20000 - 20000)
#	00 3E	0000 aaaa		
	00 3F	0000 bbbb		
	00 40	0000 cccc		
	00 41	0000 dddd	Reverb Parameter 11	(-20000 - 20000)
#	00 42	0000 aaaa		
	00 43	0000 bbbb		
	00 44	0000 cccc		
	00 45	0000 dddd	Reverb Parameter 12	(-20000 - 20000)
#	00 46	0000 aaaa		
	00 47	0000 bbbb		
	00 48	0000 cccc		
	00 49	0000 dddd	Reverb Parameter 13	(-20000 - 20000)
#	00 4A	0000 aaaa		
	00 4B	0000 bbbb		
	00 4C	0000 cccc		
	00 4D	0000 dddd	Reverb Parameter 14	(-20000 - 20000)
#	00 4E	0000 aaaa		
	00 4F	0000 bbbb		
	00 50	0000 cccc		
	00 51	0000 dddd	Reverb Parameter 15	(-20000 - 20000)
#	00 52	0000 aaaa		
	00 53	0000 bbbb		
	00 54	0000 cccc		
	00 55	0000 dddd	Reverb Parameter 16	(-20000 - 20000)
#	00 56	0000 aaaa		
	00 57	0000 bbbb		
	00 58	0000 cccc		
	00 59	0000 dddd	Reverb Parameter 17	(-20000 - 20000)
#	00 5A	0000 aaaa		
	00 5B	0000 bbbb		

#	00 5C	0000 cccc	Reverb Parameter 18	(-20000 - 20000)
	00 5D	0000 dddd		
	00 5E	0000 aaaa		
	00 5F	0000 bbbb		
#	00 60	0000 cccc	Reverb Parameter 19	(-20000 - 20000)
	00 61	0000 dddd		
	00 62	0000 aaaa		
	00 63	0000 bbbb		
#	00 64	0000 cccc	Reverb Parameter 20	(-20000 - 20000)
	00 65	0000 dddd		
00 00 00 66		Total Size		

* [KitResonance]

Offset	Address	Description		
#	00 00	0000 000a	Switch	(0 - 1) OFF, ON
	00 01	0000 000a	Drums Type	(0 - 1) STANDARD SET, SMALL SET
	00 02	0000 aaaa	Level	(-601 - 120) -INF, -60.0 - +12.0 [dB]
	00 03	0000 bbbb		
#	00 04	0000 cccc		
	00 05	0000 dddd		
#	00 06	0000 0aaa	Character	(0 - 6) 0 - 6
	00 07	0000 aaaa	Time	(-64 - 0) -64 - 0
	00 08	0000 bbbb		
	00 09	0000 000a		
	00 0A	00aa aaaa		
#	00 0B	00aa aaaa	Pre EQ Low Cut	OFF, ON (0 - 35)
			OFF, 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz	
			Pre EQ Mid 1 Freq	(0 - 58)
			20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz	
#	00 0C	00aa aaaa	Pre EQ Mid 2 Freq	(0 - 58)
			20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz	
			Pre EQ Mid 1 Q	(0 - 6)
			0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0	
#	00 0E	0000 0aaa	Pre EQ Mid 2 Q	(0 - 6)
	00 0F	0000 aaaa	Pre EQ Mid 1 Gain	(-400 - 150) -40.0 - +15.0 [dB]
#	00 10	0000 bbbb	Pre EQ Mid 2 Gain	(-400 - 150) -40.0 - +15.0 [dB]
	00 11	0000 cccc		
	00 12	0000 dddd		
	00 13	0000 aaaa		
#	00 14	0000 bbbb	Pre EQ Mid 2 Gain	(-400 - 150) -40.0 - +15.0 [dB]
	00 15	0000 cccc		
	00 16	0000 dddd		
	00 17	0000 000a		
#	00 18	0000 aaaa	Pre Transient Switch	(0 - 1) OFF, ON
	00 19	0000 bbbb	Pre Transient Attack	(-50 - 0) -50 - 0
	00 1A	0000 aaaa		
	00 1B	0000 bbbb		
#	00 1C	0000 cccc	Pre Transient Gain	(-601 - 120) -INF, -60.0 - +12.0 [dB]
	00 1D	0000 dddd		
	00 1E	0000 000a		
	00 1F	0000 000a		
#	00 20	00aa aaaa	Post EQ Switch	(0 - 1) OFF, ON
			Post EQ Mid/Side Switch	(0 - 1) OFF, ON
			Post EQ Low Freq	(0 - 34)
			20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz	
#	00 21	00aa aaaa	Post EQ Mid Freq	(0 - 58)
			20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz,	

			35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
	00 22	000a aaaa	Post EQ High Freq (0 - 24) 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
#	00 23	0000 0aaa	Post EQ Mid Q (0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 24	0000 aaaa	
	00 25	0000 bbbb	
	00 26	0000 cccc	
	00 27	0000 dddd	Post EQ Low Gain (-400 - 150) -40.0 - +15.0[dB]
#	00 28	0000 aaaa	
	00 29	0000 bbbb	
	00 2A	0000 cccc	
	00 2B	0000 dddd	Post EQ Mid Gain (-400 - 150) -40.0 - +15.0[dB]
#	00 2C	0000 aaaa	
	00 2D	0000 bbbb	
	00 2E	0000 cccc	
	00 2F	0000 dddd	Post EQ High Gain (-400 - 150) -40.0 - +15.0[dB]
	00 30	00aa aaaa	Post EQ Side Low Freq (0 - 34) 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz
	00 31	00aa aaaa	Post EQ Side Mid Freq (0 - 58) 20Hz, 22.5Hz, 25Hz, 28.25Hz, 31.5Hz, 35.75Hz, 40Hz, 45Hz, 50Hz, 56.5Hz, 63Hz, 71.5Hz, 80Hz, 90Hz, 100Hz, 112.5Hz, 125Hz, 142.5Hz, 160Hz, 180Hz, 200Hz, 225Hz, 250Hz, 282.5Hz, 315Hz, 357.5Hz, 400Hz, 450Hz, 500Hz, 565Hz, 630Hz, 715Hz, 800Hz, 900Hz, 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
	00 32	000a aaaa	Post EQ Side High Freq (0 - 24) 1kHz, 1.125kHz, 1.25kHz, 1.425kHz, 1.6kHz, 1.8kHz, 2kHz, 2.25kHz, 2.5kHz, 2.825kHz, 3.15kHz, 3.575kHz, 4kHz, 4.5kHz, 5kHz, 5.65kHz, 6.3kHz, 7.15kHz, 8kHz, 9kHz, 10kHz, 11.25kHz, 12.5kHz, 14.25kHz, 16kHz
#	00 33	0000 0aaa	Post EQ Side Mid Q (0 - 6) 0.5, 1.0, 2.0, 3.0, 4.0, 8.0, 16.0
	00 34	0000 aaaa	
	00 35	0000 bbbb	
	00 36	0000 cccc	
	00 37	0000 dddd	Post EQ Side Low Gain (-400 - 150) -40.0 - +15.0[dB]
#	00 38	0000 aaaa	
	00 39	0000 bbbb	
	00 3A	0000 cccc	
	00 3B	0000 dddd	Post EQ Side Mid Gain (-400 - 150) -40.0 - +15.0[dB]
#	00 3C	0000 aaaa	
	00 3D	0000 bbbb	
	00 3E	0000 cccc	
	00 3F	0000 dddd	Post EQ Side High Gain (-400 - 150) -40.0 - +15.0[dB]
	00 40	0000 000a	Post Comp Switch (0 - 1) OFF, ON
#	00 41	0000 aaaa	
	00 42	0000 bbbb	Post Comp Gain (-48 - 48) -24.0 - +24.0[dB]
#	00 43	0000 aaaa	
	00 44	0000 bbbb	Post Comp Threshold (-60 - 0) -60 - 0[dB]
	00 45	0000 0aaa	Post Comp Ratio (0 - 7) 1:1, 2:1, 3:1, 4:1, 8:1, 16:1, 32:1, INF:1
	00 46	0000 00aa	Post Comp Knee (0 - 3) HARD, SOFT1, SOFT2, SOFT3
	00 47	0aaa aaaa	Post Comp Attack (0 - 100) 0.1 - 100[ms]
	00 48	0aaa aaaa	Post Comp Release (0 - 99) 10 - 1000[ms]
	00 00 00 49	Total Size	

4. Supplementary Material

●Decimal and Hexadecimal Table

(An H is appended to the end of numbers in hexadecimal notation.)

In MIDI documentation, data values and addresses/sizes of exclusive messages etc. are expressed as hexadecimal values for each 7 bits.

The following table shows how these correspond to decimal numbers. (in the case of hexadecimal values for each 7 bits, or positive hexadecimal values for each 4 bits.)

D	H	D	H	D	H	D	H
0	00H	32	20H	64	40H	96	60H
1	01H	33	21H	65	41H	97	61H
2	02H	34	22H	66	42H	98	62H
3	03H	35	23H	67	43H	99	63H
4	04H	36	24H	68	44H	100	64H
5	05H	37	25H	69	45H	101	65H
6	06H	38	26H	70	46H	102	66H
7	07H	39	27H	71	47H	103	67H
8	08H	40	28H	72	48H	104	68H
9	09H	41	29H	73	49H	105	69H
10	0AH	42	2AH	74	4AH	106	6AH
11	0BH	43	2BH	75	4BH	107	6BH
12	0CH	44	2CH	76	4CH	108	6CH
13	0DH	45	2DH	77	4DH	109	6DH
14	0EH	46	2EH	78	4EH	110	6EH
15	0FH	47	2FH	79	4FH	111	6FH
16	10H	48	30H	80	50H	112	70H
17	11H	49	31H	81	51H	113	71H
18	12H	50	32H	82	52H	114	72H
19	13H	51	33H	83	53H	115	73H
20	14H	52	34H	84	54H	116	74H
21	15H	53	35H	85	55H	117	75H
22	16H	54	36H	86	56H	118	76H
23	17H	55	37H	87	57H	119	77H
24	18H	56	38H	88	58H	120	78H
25	19H	57	39H	89	59H	121	79H
26	1AH	58	3AH	90	5AH	122	7AH
27	1BH	59	3BH	91	5BH	123	7BH
28	1CH	60	3CH	92	5CH	124	7CH
29	1DH	61	3DH	93	5DH	125	7DH
30	1EH	62	3EH	94	5EH	126	7EH
31	1FH	63	3FH	95	5FH	127	7FH

D: decimal

H: hexadecimal

* Decimal values such as MIDI channel, bank select, and program change are listed as one greater than the values given in the above table.

* A 7-bit byte in hexadecimals can express data in the range of 128 steps. For data where greater precision is required, we must use two or more bytes. For example, two hexadecimal numbers aa bbH expressing two 7-bit bytes would indicate a value of aa x 128+bb.

* In the case of data to which multiple addresses are assigned, a hexadecimal value is used for each four bits. A value 0a 0bH expressed as two-byte nibbles will be a x 16+b.

* For values with a $\pm$ sign, 00H=-64, 40H= $\pm$ 0, and 7FH=+63. When expressing these values as decimal expressions, we use values that are 64 less than the values in the decimal table above. In the case of a two-byte value, 00 00H=-8192, 40 00H= $\pm$ 0, and 7F 7FH=+8191. For example, aa bbH expressed in decimal would be aa bbH - 40 00H=aa x 128+bb-64 x 128.

<Example 1> What is the decimal expression of 5AH?

From the preceding table, 5AH = 90

<Example 2> What is the decimal expression of the value 12 34H given as hexadecimal for each 7 bits?

From the preceding table, since they are 12H = 18 and 34H = 52,
 $18 \times 128 + 52 = 2356$

■ Examples of Actual MIDI Messages

<Example 1> 92 3E 5F

9n is the Note-on status, and n is the MIDI channel number. Since 2H = 2, 3EH = 62, and 5FH = 95, this is a Note-on message with MIDI CH = 3, note number 62 (note name is D4), and velocity 95.

<Example 2> C9 20

CnH is the Program Change status, and n is the MIDI channel number. Since 9H = 9 and 20H = 32, this is a Program Change message with MIDI CH = 10, program number 33.

<Example 3> 99 2C 7F B9 04 7F 04 40

9n is the Note-on status, and n is the MIDI channel number. BnH is the Control Change status, and n is the MIDI channel number. Thus, the above messages have the following meaning.

99 2C 7F MIDI ch. 10, Note On message
 B9 04 7F MIDI ch. 10, foot controller: 7FH
 (B9) 04 40 (MIDI ch. 10), foot controller: 40H

In other words, with these messages a Note On message with a note number of 44 (G#2) and velocity of 127 is transmitted on MIDI Channel 10, and then the foot controller value is set from 127 to 64.

According to the settings made at the factory, the drum part is assigned to MIDI Channel 10, Note Number 44 is assigned to the pedal hi-hat, and the foot controller is set to Pedal CC; in this case, the V71 plays a foot splash when the message is received.

■ Examples of Exclusive Messages and Checksum Calculation

When transmitting Roland exclusive messages (DT1), a checksum is added following the data (before F7) so that the receiving device can check whether the message was received correctly.

The checksum value is determined by the address and data of the exclusive message that is transmitted.

● How to calculate the checksum

(An H is appended to the end of numbers in hexadecimal notation.)

The checksum is a value derived by adding the address, data and checksum itself and inverting the lower 7 bits.

Here's an example of how the checksum is calculated. We will assume that in the exclusive message we are transmitting, the address is aa bb cc ddH and the data is ee ff gg hhh.

aa + bb + cc + dd + ee + ff + gg + hh = sum

sum / 128 = quotient ... remainder

128 - remainder = checksum

(However, the checksum will be 0 if the remainder is 0.)

<Example 1>

To set the EQ for layer A of the SNARE HEAD of drum kit number 1 to ON

"Parameter address map" indicates that the start address of drum kit 1 is 04 00 00 00H, the offset address of the layer A parameter of the SNARE HEAD is 00 52 00H, and the offset address of the layer EQ Switch is 00 21H; therefore, the address is

04 00 00 00H

```

      00 52 00H
+)    00 21H
-----
04 00 52 21H

```

Since 0N is the parameter value 01H

```

F0 41 10 01 06 01 12 04 00 52 21 01 ?? F7
(1) (2) (3) (4) (5) address data checksum (6)

```

(1) Exclusive Status (2) ID (Roland)
 (3) Device ID (17) (4) Model ID (V71)
 (5) Command ID (DT1) (6) EOX

Then calculate the checksum.

$04H + 00H + 52H + 21H + 00H + 00H + 01H = 4 + 0 + 82 + 33 + 1 = 120(\text{sum})$

$120(\text{sum}) \div 128 = 0(\text{quotient}) \dots 120(\text{remainder})$

$\text{checksum} = 128 - 120(\text{remainder}) = 8 = 08H$

This means that F0 41 10 01 06 01 12 04 00 52 21 01 08 F7 is the message should be sent.

<Example 2>

Requesting transmission of the pad compressor switch for the snare of drum kit number 1

"Parameter address map" indicates that the start address of drum kit 1 is 04 00 00 00H, the offset address of the snare pad parameters is 02 11 00H, and the offset address of the pad compressor switch is 00 0DH; therefore, the address is

```

      04 00 00 00H
      02 11 00H
+)    00 0DH
-----
04 02 11 0DH

```

Since the size is 00 00 00 01H

```

F0 41 10 01 06 01 11 04 02 11 0D 00 00 00 01 ?? F7
(1) (2) (3) (4) (5) address data checksum (6)

```

(1) Exclusive Status (2) ID (Roland)
 (3) Device ID (17) (4) Model ID (V71)
 (5) Command ID (RQ1) (6) EOX

Then calculate the checksum.

$04H + 02H + 11H + 0DH + 00H + 00H + 01H = 4 + 2 + 17 + 13 + 0 + 0 + 0 + 1 = 37(\text{sum})$

$37(\text{sum}) \div 128 = 0(\text{quotient}) \dots 37(\text{remainder})$

$\text{checksum} = 128 - 37(\text{remainder}) = 91 = 5BH$

This means that F0 41 10 01 06 01 11 04 02 11 0D 00 00 00 01 5B F7 is the message should be sent.

5. MIDI Implementation Chart

Date: Nov. 1, 2024
Version: 1.12

Model V71
(Sound Generator Section)

MIDI Implementation Chart

Function...	Transmitted	Recognized	Remarks
Basic Channel Default Changed	1-16, OFF 1-16, OFF	1-16, OFF 1-16, OFF	Memorized
Mode Default Messages Altered	Mode 3 x *****	Mode 3 x x	
Note Number :True Voice	0-127 *****	0-127 0-127	
Velocity Note On Note Off	o 9nH, v = 1-127 o 8nH, v = 64	o x	
After Touch Key's Channel's	o x	o x	
Pitch Bend	x	x	
Control Change 0, 32 1 2 4 11 16 - 19 80 - 83 88	o o (Pad, Pedal) *1 *2 *3 o (Pad, Pedal) *1 *2 *3 o (Pad, Pedal) *1 *2 *3 o (Pad, Pedal) *1 *2 *3 o (Pad, Pedal) *1 *2 *3 o (Pad, Pedal) *1 *2 *3 o (Pad, Pedal) *1 *2 *3 o v = 0-127 *4	o *1 *2 *3 o *1 *2 *3 o *1 *2 *3 o *1 *2 *3 o *1 *2 *3 o v = 0-127 *4	Bank Select Modulation Breath Controller Foot Controller Expression General Purpose Controller 1-4 General Purpose Controller 5-8 High Resolution Velocity Prefix
Program Change :True Number	o 0-127 ***** *4	o 0-127 0-127 *4	Program No. 1-128
System Exclusive	o *7	o *4	
System Common :Song Position :Song Select :Tune Request	x x x	x x x	
System Real Time :Clock :Commands	x x	o x *5	
Aux Messages :All Sound Off :Reset All Controllers :Local On/Off :All Notes Off :Active Sensing :System Reset	o x x x o x	o (120, 123-127) o x o o x	*6
Notes	*1 One is selected as the strike position. *2 One is selected as the hi-hat control pedal. *3 One is selected as the Snare Strainer. *4 o/x is selectable. *5 Receives when Sync Mode setting is EXTERNAL. *6 The same result as All Sound Off. *7 Transmitted if Transmit Edit Data is on, or when RQ1 is received.		

(Recorder Section)

Function...	Transmitted	Recognized	Remarks
Basic Channel Default Changed	1-16, OFF 1-16, OFF	1-16, OFF 1-16, OFF	
Mode Default Messages Altered	Mode 3 x *****	Mode 3 x x	
Note Number :True Voice	0-127 *****	0-127 0-127	
Velocity Note On Note Off	o 9nH, v = 1-127 o 8nH, v = 64	o x	
After Touch Key's Channel's	o x	o x	
Pitch Bend	x	x	
Control Change 1 2 4 11 16 - 19 80 - 83 88	o (Pad, Pedal) *1 *2 *3 o (Pad, Pedal) *1 *2 *3 o (Pad, Pedal) *1 *2 *3 o (Pad, Pedal) *1 *2 *3 o (Pad, Pedal) *1 *2 *3 o (Pad, Pedal) *1 *2 *3 o v = 0-127 *4	o *1 *2 *3 o *1 *2 *3 o *1 *2 *3 o *1 *2 *3 o v = 0-127 *4	Modulation Breath Controller Foot Controller Expression General Purpose Controller 1-4 General Purpose Controller 5-8 High Resolution Velocity Prefix
Program Change :True Number	x *****	x x	
System Exclusive	x	x	
System Common :Song Position :Song Select :Tune Request	x x x	x x x	
System Real Time :Clock :Commands	o x	o o *5 *6 *5 *7	

Aux Messages	:All Sound Off	x	x	
	:Reset All Controllers	x	x	
	:Local On/Off	x	x	
	:All Notes Off	x	x	
	:Active Sensing	x	x	
	:System Reset	x	x	
Notes		*1 One is selected as the strike position. *2 One is selected as the hi-hat control pedal. *3 One is selected as the Snare Strainer. *4 o/x is selectable. *5 Receives when Sync Mode setting is EXTERNAL. *6 Applies to the tempo when the song is stopped. Does not apply to the tempo when the song is playing. *7 The song does not play/stop. When the START message is received while the song is stopped, the click playback is reset.		

Mode 1 : OMNI ON, POLY
 Mode 3 : OMNI OFF, POLY

Mode 2 : OMNI ON, MONO
 Mode 4 : OMNI OFF, MONO

o : Yes
 x : No